

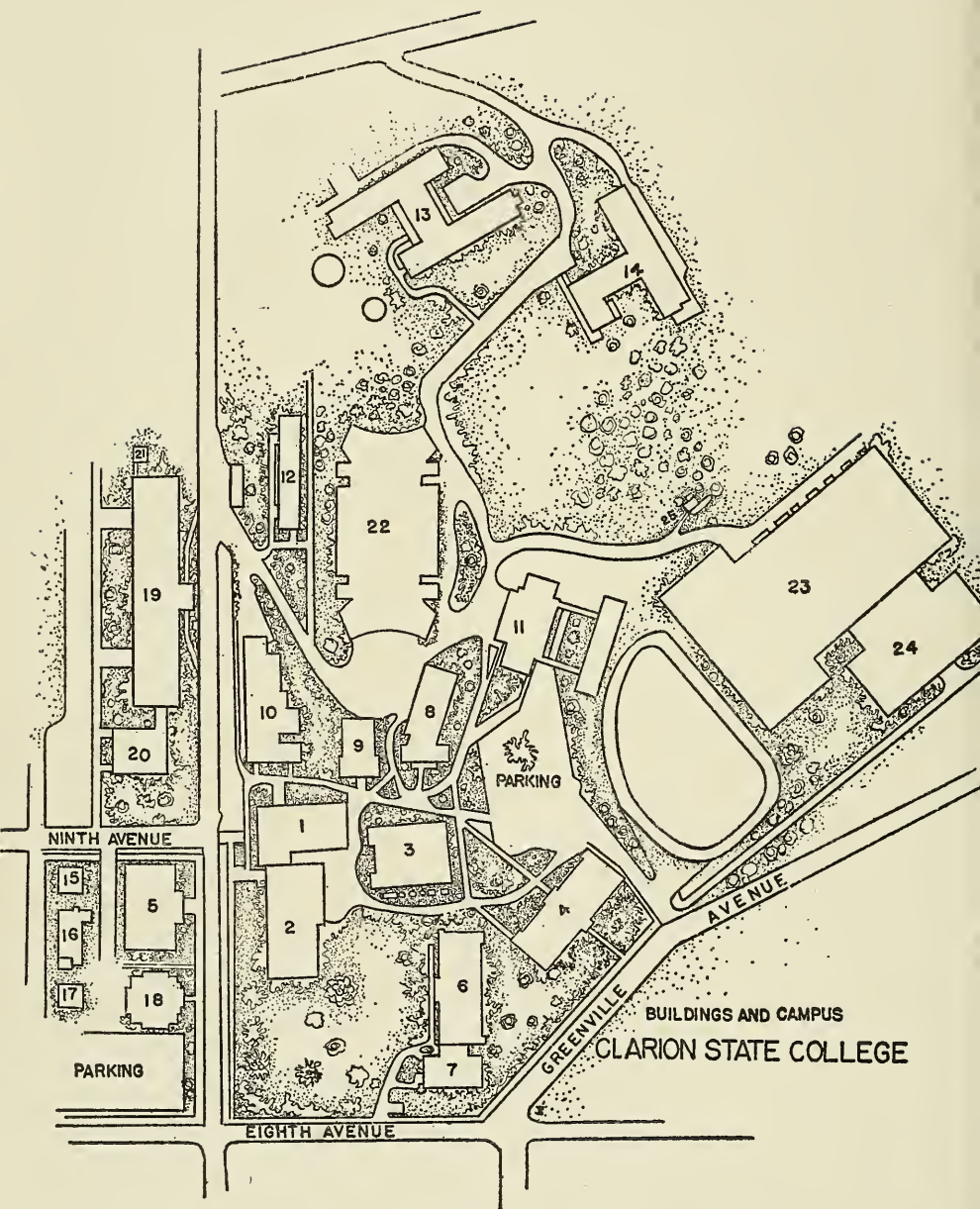
CLARION

STATE

COLLEGE

1965 • 1966





1. Administration
Business Offices-Bookstore
2. Library
3. Seminary Hall
4. Davis Hall
5. Science Hall
6. Demonstration School
7. Special Education Center
8. Egbert Hall

9. Music Hall
10. Becht Hall
11. Harvey Gymnasium
Student Union
12. Ballentine Hall
13. Given Hall
14. Ralston Hall
15. Laundry Services
16. Heating Plant

17. Garage
18. Chapel
19. Science Center
20. Planetarium
21. Greenhouse
22. Kitchen-Dining Facilities
23. Field House and Gymnasium
24. Natatorium
25. President's Residence

The Clarion

Volume LIV

1965

Number 1

Clarion State College

Clarion, Pennsylvania

Member of American Association of Colleges for
Teacher Education

Accredited by Middle States Association of Colleges
and Secondary Schools


National Council for Accreditation of
Teacher Education

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CALENDAR 1964-65

PRE-SESSION 1964

Session Begins	Monday, June 8
Session Ends	Friday, June 26

REGULAR SUMMER SESSION 1964

Session Begins	Monday, June 29
Session Ends	Friday, August 7

POST SESSION 1964

Session Begins	Monday, August 10
Session Ends	Friday, August 28

FIRST SEMESTER 1964-65

Registration of Freshmen	Tuesday, September 8
	Wednesday, September 9
Registration of Upperclassmen	Wednesday, September 9
	Thursday, September 10
Classes Begin at 8:00 A.M.	Friday, September 11
Evening Classes Begin	Thursday, September 17
Thanksgiving Recess Begins 5:05 P.M.	Tuesday, November 24
Thanksgiving Recess Ends 8:00 A.M. ..	Monday, November 30
Christmas Recess Begins at the	
Close of Classes	Saturday, December 19
Christmas Recess Ends at 8:00 A.M.	Monday, January 4
Evening Classes End	Thursday, January 14
Semester Ends at Noon	Tuesday, January 19
Baccalaureate and Commencement	Sunday, January 17

SECOND SEMESTER 1964-65

Registration	Monday, January 25
	Tuesday, January 26
Classes Begin at 8:00 A.M.	Wednesday, January 27
Evening Classes Begin	Thursday, January 28
Easter Recess Begins 5:05 P.M.	Wednesday, April 14
Easter Recess Ends 8:00 A.M.	Tuesday, April 20
Evening Classes End	Thursday, May 13
Alumni Day	Saturday, May 22
Baccalaureate and Commencement	Sunday, May 23

CALENDAR 1965-1966

PRE-SESSION 1965

Session Begins	Monday, June 7
Session Ends	Friday, June 25

REGULAR SESSION 1965

Session Begins	Monday, June 28
Session Ends	Friday, August 6

POST SESSION 1965

Session Begins	Monday, August 9
Session Ends	Friday, August 27

FIRST SEMESTER 1965-1966

Registration of Freshmen and New Students	Tuesday, September 7
	Wednesday, September 8
Registration of Upperclassmen	Wednesday, September 8
	Thursday, September 9
Classes Begin at 8:00 A.M.	Friday, September 10
Evening Classes Begin	Thursday, September 16
Thanksgiving Recess Begins 5:05 P.M.	Tuesday, November 23
Thanksgiving Recess Ends 8:00 A.M.	Monday, November 29
Christmas Recess Begins 5:05 P.M.	Saturday, December 17
Christmas Recess Ends 8:00 A.M.	Monday, January 3
Evening Classes End	Thursday, January 13
Final Examinations	January 11 to January 18
Baccalaureate and Commencement	Sunday, January 16
Semester Ends	Tuesday, January 18

SECOND SEMESTER 1965-1966

Registration	Monday, January 24
	Tuesday, January 25
Classes Begin	Wednesday, January 26
Evening Classes Begin	Thursday, January 27
Easter Recess Begins 5:05 P.M.	Wednesday, April 6
Easter Recess Ends 8:00 A.M.	Tuesday, April 12
Evening Classes End	Thursday, May 12
Final Examinations	May 14 to May 20
Alumni Day	Saturday, May 21
Baccalaureate and Commencement	Sunday, May 22
Semester Ends	Monday, May 23

THE CAMPUS AND FACILITIES

Campus

The main campus of Clarion State College presently occupies a tract of thirty acres. In addition, a twenty-nine acre plot has been purchased and developed for a new athletic and recreational area. The campus plan is pleasingly arranged and ordered so that unity and function are integrated with aesthetic considerations of space. The expansive lawns with judicious placement of landscape materials complement the architecture and create a stimulating environment for college life.

Seminary Hall, the oldest building on campus, houses the main offices, practice rooms, rehearsal areas, and classrooms of the Music Department.

Music Hall is now a classroom and office building for the Speech Department with the President's home on the second floor.

Science Hall contains the Physical Science and Geography Departments, classrooms, laboratories, and offices.

The Chapel, an attractive stone building with a seating capacity of five hundred, is used for college assemblies, concerts, and dramatic presentations.

The Administration and Library Building is a new structure facing Wood Street from the front campus. The west wing is occupied by the Library, the Library Science Department, and classrooms. The second wing houses all the college administrative and business offices. The college book store and the post office are in the basement of the administrative wing.

The A. J. Davis Education Building was named for A. J. Davis, president of the college from its beginning in 1887 to 1902. It is modern in design and well-equipped. In it are located the Art, Biology and Health Departments and classrooms. The office of the College nurse and campus television facilities are located on the first floor of this building.

Thaddeus Stevens Laboratory School was named for Thaddeus Stevens, the father of the Pennsylvania Public School Law passed in 1834. This building contains accommodations for the first six grades of the public school and a large, well-equipped kindergarten. This school is used for demonstration purposes, directed observation, and student teaching by prospective elementary teachers.

The Special Education Building is a new wing on the west end of Thaddeus Stevens Laboratory School facing Eighth Avenue. The structure houses five classrooms, a hearing and speech clinic, a psychological clinic, a thirty-station language laboratory, and the Special Education office.

The Harvey Gymnasium was named for Frank Laird Harvey, a Trustee of the College from 1911 to 1932. The building is provided with gymnastic equipment of various kinds,



Clarion's campus is small, comfortable, and friendly

recreation rooms, and offices. The Student Union is located on the ground floor of this building. With the completion of the New Gymnasium and Field House, Harvey Gymnasium will be entirely converted to a Student Center. Plans are being developed to implement this program as soon as conditions are favorable.

The Rena M. Carlson Library, named for Professor Rena M. Carlson, who was College Librarian from 1929 to 1963, is located in the new library-administration building and has space for 100,000 volumes. At present the library has 62,000 volumes and 434 current periodicals. Many periodicals are bound or on microfilm, forming part of the reference collection. The new building also houses a curriculum library and library science classrooms and offices.

An elementary school library in the Thaddeus Stevens Laboratory School serves children, teachers, and student teachers. A library is also located on Venango Campus.

Speech and Hearing Clinic. New equipment for use in the enlarged speech curriculum has been purchased and is installed in the Special Education building.

Science Laboratories for physical sciences are located in Science Hall, and for biological sciences in Davis Hall. Each is well equipped with new, modern apparatus and other facilities for teaching biology, nature study, zoology, botany, physics, and chemistry.

Infirmary services are provided in a well equipped facility located on the first floor of Egbert Hall. A professional nursing and medical staff is available for all general health problems.

New facilities under construction include a spacious and well appointed kitchen-dining facility; a combined gymnasium, field house, and natatorium; and a fully integrated science center and planetarium.

Long range planning includes the development of additional facilities which are part of the College Master Plan projected for completion by 1972. Included in the Plan are a fine arts center and auditorium, an additional wing for the library, classroom buildings, a learning and research center, a health services building, an administrative unit, and several additional dormitories. As part of this program, an additional twenty-five acres of land will be acquired.

RESIDENCE HALLS

Ballentine Hall, residence for young men, was named for Professor John Ballentine, who was a teacher and at various times acting president at the College from 1887 to 1920.

Becht Hall, residence for young women, was named for J. George Becht who was president of the College from 1904 to 1912. The college dining hall is located in this building.

Egbert Hall, residence for young women, was named for Professor Walter R. Egbert, who was teacher and dean of men at the College from 1887 to 1920.

Lorena Given Hall, residence for young women, was named for Lorena M. Given who taught at the College from 1893 to 1919.

Ralston Hall, a residence for young women, was named for Mrs. Amabel Lee Ralston, Dean of Women, 1922 to 1930.

VENANGO CAMPUS

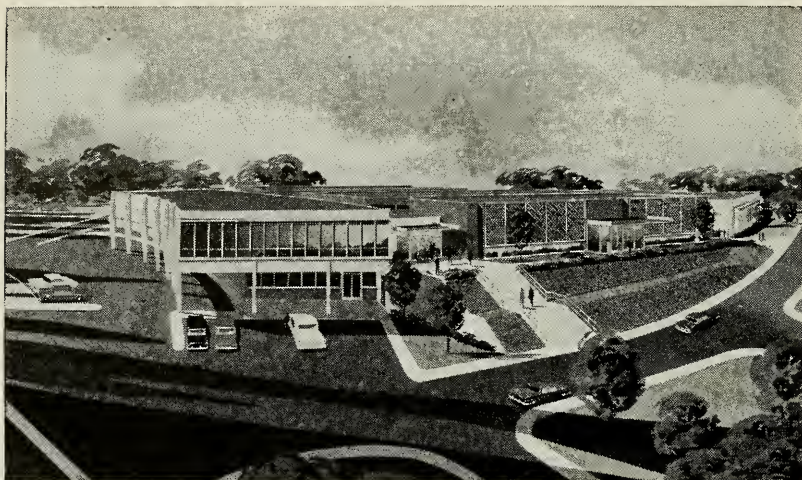


Venango Campus, Clarion's branch campus in Oil City

Clarion State College operates an off-campus center located in Oil City, Pennsylvania. Clarion's Venango Campus is a tribute to the civic spirit of the people of the Oil City area who supported and financed the venture, making possible the construction of an attractive, modern building containing classrooms, laboratories, a library, a recreation room, and college offices. The Campus is located on a sixty-acre wooded area on West Front Street overlooking the Allegheny River.

Staffed with competent, professional educators, Venango Campus offers students a convenient, inexpensive opportunity for two years of their college education. Courses offered at the branch campus in both teacher education and the liberal arts are identical with those offered on main campus. At the end of two years, students may transfer from Venango Campus to the main campus at Clarion, retaining all the credits they have taken.

In addition to the two-year college curriculum now offered, Venango Campus and the Oil City School of Nursing are developing a program leading to the degree of Bachelor of Science in Nursing. Also, the Oil City Chamber of Commerce, with the cooperation of Venango Campus, has established at the Campus building an adult evening school offering a variety of non-credit courses.



Modern dining hall under construction at Clarion

STUDENT AFFAIRS

Clarion provides not only for the academic training of young men and women, but also for their all-around development as mature, self-confident, socially competent individuals. All campus facilities, including residence halls, dining rooms, social centers, and other places where students meet and live, are organized and used as means for helping students toward cooperative, democratic living.

To help ensure this development, certain student personnel services are provided. These services enable those enrolled at Clarion to perform more adequately as students and to derive maximum benefit from the academic, cultural, social, and recreational opportunities offered by the campus environment. In addition, every administrative or teaching member of the faculty is charged with the responsibility of assisting students to make a wholesome adjustment to college life.

Student activities represent an important phase of student-faculty association and of social and recreational experience. Campus organizations provide a program in which each student may engage, according to his individual interests, in activities which meet his own needs and desires.

Clarion students have a voice in forming and administering college policies by serving with the faculty on many standing committees. Through student government, students exercise direct control over many phases of student life.

STUDENT PERSONNEL SERVICES

Academic Advisement

In order to assist each student in the achievement of maximum academic and personal development, a continuous program of guidance services is provided. This program begins with the process of admission and pre-college counseling. Through tests of scholastic aptitude, interviews, and careful review of high school records and references, the college selects those students who, in its opinion, can benefit from the types of programs offered at Clarion. Following admission, a continuing correspondence is maintained in order to prepare the individual for the initial adjustments which will be required.

After admission, an organized program of orientation, testing, and counseling is made available to each student. Entering freshmen are required to complete a series of tests, the results of which are used by their advisers in academic counseling.

Shortly after the student enters the college, he is assigned to a faculty member who will act as his adviser during his freshman year. When the student makes a definite selection of a field of concentration, a member of his major department will become his adviser.

Each student should consult with his adviser as often as is necessary to be assured that he is meeting the graduation requirements and at such other times as he feels the need of counseling services. In addition, he should check with the Dean of Instruction during the junior and senior years in order to be assured that he will meet degree requirements by the time he expects to graduate.

In order to determine the student's progress and to ensure adequate continuing advisement, the college administers such standardized tests as are deemed advisable during the second semester of the sophomore year. At this time a careful review of test results, as well as the over-all record of achievement of each student, is made by a committee of the faculty members.

The college may also administer a recognized terminal test just prior to graduation in order to measure the relative academic success of each student as well as the effectiveness of the instructional program of the college.

At all times, the student is free to seek advice from any faculty member to whom he may wish to go for help.

Counseling Service

The student counseling service of the college is intended to aid students with common problems encountered in college, such as inability to concentrate on studies; worries about home, school, or social life; or undue doubts about one's own ability.

Referrals to this service will be submitted through the director of the service. These referrals may originate from the person himself, friends, college faculty members, or parents. Recognized problems of a specific nature will be channeled to counseling staff members prepared to work with the student.

Confidential permanent records are maintained for each individual student. Referral is on a voluntary basis only to those students who wish to accept and participate in the counseling service. For those students in need of more comprehensive psychotherapeutic care, a referral service is maintained by the college with the Regional Mental Health Clinic. These services are provided at no cost to the student for the first several visits; however, a minimal fee is assessed for extended care or treatment.

The counseling service was established to help students with problems beyond the scope of usual advisory functions and to act as a clearing house and repository for non-academic personnel records of students. It will also provide counsel to any student with personal adjustment problems of a transitory nature.

Food Service

Wholesome, well-balanced meals are provided by the A. L. Mathias Company in an attractive dining room. All resident students are required to eat in the college dining room. A limited number of students who live off campus may do so. Students who board at the dining hall will not be permitted to withdraw during a semester unless they leave school.

Meals can be provided for a limited number of guests in the college dining room. Individual meal rates are: breakfast, 60 cents; lunch, 85 cents; and dinner, \$1.25 plus tax. These fees are payable to the food service manager.

Health Service

Recognizing that health is a basic objective of education, the college provides for the protection and development of the health of its students. An infirmary is maintained with a registered nurse in attendance. The college physician holds regular office hours at the dispensary Monday through Friday of each week.

Physical examinations are provided for all seniors and results are available to the student for teacher certification and job application purposes. Other students may be examined on referral by members of the college faculty or staff.

Medical services in addition to routine infirmary treatment or at hours other than those during which the physician is in attendance are readily available within the community of Clarion; however, the student is responsible for any expense incurred. It is the policy of the college that, in case of emergencies created by illness or injury, a local physician be contacted either directly or through the community hospital. If hospitalization is indicated the parents will be contacted immediately in order that their wishes may be known. In any case requiring transportation to a hospital, an ambulance will be used at the expense of the individual involved.

In order to ease the financial burdens which could result from this policy, Clarion offers an optional group insurance plan which covers the student from the day college opens in the fall until the end of the college year. Students who desire to continue their insurance through the summer months may do so upon application and payment of an additional premium before May 20 of each year.

This contract is underwritten by Educators Mutual Life Insurance Company, Lancaster, Pennsylvania. Following are the essential provisions of this plan which are incorporated into a control policy held by the college.

Accident—Reimbursement will be made up to \$1000 for each accident whether the accident occurs at college, at home, while traveling, or while participating in sports, other than intercollegiate athletic activities, and for expenses including X-rays; hospital bills; nurses', physicians' and surgeons' fees; laboratory costs; medicines; and, in fact, any medical expense incurred as a result of an accident. Reimbursement for injury to natural teeth is limited to \$200.00.

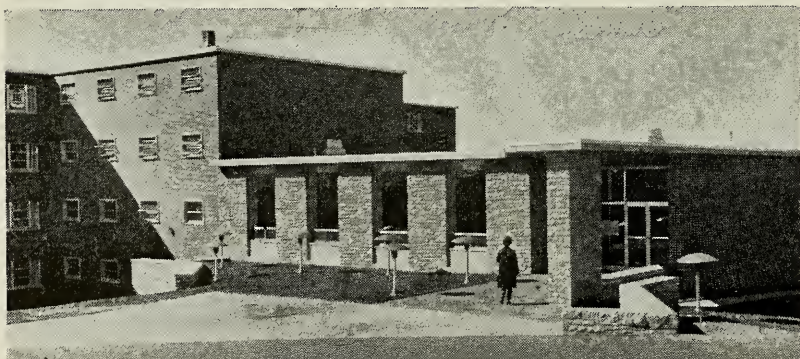
Illness—Reimbursement, not to exceed \$500 for each illness, will be made for actual medical expenses related to illness contracted and treated during the period for which the student is insured. Expenses include but are not limited to X-rays; laboratory examinations; hospital bills; nurses', physicians' and surgeons' fees; medicines; and surgical appliances.

Benefits under this plan are paid in addition to any benefits to which a student may be entitled under any personal policy or membership in any hospital association.

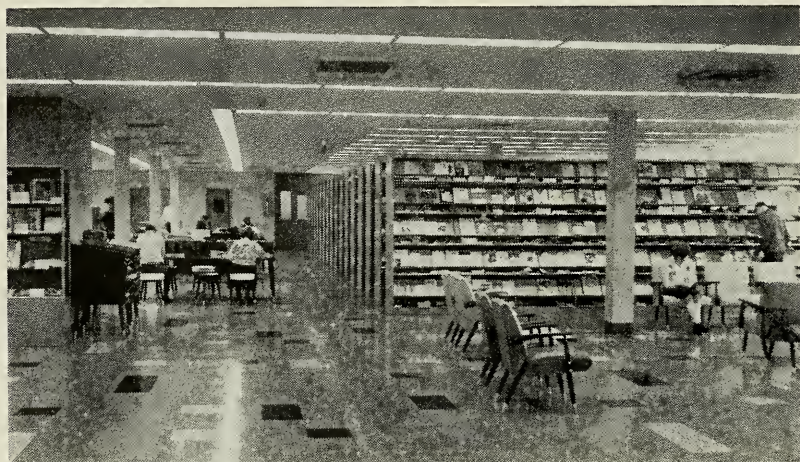
Living Accommodations

Students at Clarion State College live in residence halls, in fraternity houses, in their own homes, or in approved homes in town. Freshman men and all women are required to live in the residence halls unless commuting from home. Some special cases, i.e., students working for room and board, etc., may be granted permission to live off-campus. Students residing in campus housing facilities must continue in residence for the entire year unless they withdraw from college or move to another community for the purpose of student teaching.

Student rooms in the residence halls are furnished with beds, desks, chairs, bureaus, and closets. The college provides



Modern residence halls make spacious living easier, more fun at Clarion.



New facilities at Clarion make studying pleasant and easy.

pillows, pillow slips, sheets and blankets. Students should plan to furnish a study lamp, towels, washcloths, and soap. Many students also provide window curtains, dresser scarves, bed spreads, and small throw rugs. Radios and record players are permitted if they are operated with due consideration for others; however, other electrical appliances are not permitted in the rooms.

Residence Hall Rules and Regulations are for the most part contained in the student handbook. Current rules and regulations have been established and are enforced by the various House Councils.

A list of approved rooms in town is available upon request in the Office of the Dean of Students. Students not living in the residence halls or commuting from their homes are required to select rooms from this approved list and to make all arrangements for rental with the householder.

Placement Service

The College Placement Service assists both teacher education and liberal arts graduates in obtaining positions for which their college program has qualified them. Vacancy notices are received from public schools, business, and industry and are relayed to those who are registered with the Placement Services. Assistance is given college students and personnel officials in arranging for employment interviews. Placement credentials are prepared and distributed to support the candidacy of registrants. Students' competence in their areas of specialization, their conduct, and their general demeanor are presented in a professional manner by the Placement Service for review by prospective employers.

The Placement Service is a free service. Graduates of former years are served as well as current seniors, and all are urged to maintain their contacts with the Placement Service as a means of facilitating professional promotion.

Counseling and guidance in placement are provided for all registrants. Students are encouraged to call personally at the Placement Office. Following graduation, placement matters are handled by telephone communication or mail.

All communications should be addressed to the Director of Placement.

Veterans' Affairs

Clarion is approved by the Veterans Administration to offer the regular degree curricula to veterans and children of deceased veterans.

Credit for educational experience in the Armed Services is allowed on the basis of the recommendations of the American Council on Education.

Veterans seeking information should consult the Dean of Instruction.

STUDENT ACTIVITIES

Student activities at Clarion are viewed as another means of self-development; therefore, the responsibility for the success of any activity or organization must rest with the students involved. As a result of this policy, ample opportunity exists for gaining experience in leadership and self-government.

Student Government

Through participation in student government, students have an opportunity to gain experience in democratic living and self-government. All students become members of the Clarion Students' Association upon their initial enrollment at Clarion and, thereby, eligible to participate in the election of the Student Senate, governing body of the Association. The Student Senate serves as a coordinating body for student activities and a means of communication between students and faculty and administration.

In addition, the Student Senate is responsible for the expenditure of student activity fees through allocations to the various activities and organizations. The Senate has a less direct, but nevertheless important, relationship to other Association operations such as the College Bookstore and the Student Union Snack Bar, and it confirms nominations of student representatives to various standing committees of the college made by the President of The Clarion Student Association.

Other opportunities for self-government are provided through the governing boards of the Association of Women Students, Panhellenic Council, Inter-Fraternity Council, the Day Students' Association, and the various residence hall councils and boards.

Each year, prior to the opening of college, a group of students who have shown actual or potential leadership qualities through their participation in student affairs and election to leadership positions are invited to return to the campus to participate in a Leadership Workshop. This Workshop is sponsored by the Office of the Dean of Students and the Student Senate and is coordinated by a student chairman.

The Leadership Workshop has as its basic purpose the development of positive student leadership. It also is planned to give potential leaders an opportunity to discuss various methods of leadership and to gain a working knowledge of the tools of leadership.

The full utilization of this leadership is a very necessary ingredient of success in any college or university, and the maximum development of the leadership potential of each student must be considered an important part of the educational process. It is a well established fact that even though a college may have an excellent faculty and physical plant, it cannot attain true excellence unless it also has a capable and energetic student body able and willing to accept the responsibilities inherent in leadership.

Cultural Program

In addition to full utilization of the numerous performing groups composed of members of the student body and faculty, the college presents each year a series of performances by nationally known personalities and organizations. This series is arranged by the Concert and Lecture Committee, a subcommittee of the Student Affairs Committee of the college having equal student and faculty representation. Following are some of the artists who have appeared as a part of this series during recent years:

The Baltimore Symphony Orchestra

Martha Scott, Actress

Jack Harrold, Actor

Vincent Price, Actor and Artist

Josh White, Folk Singer

Dr. Werhner von Braun, Physicist and Lecturer

Kai Winding Orchestra

Dr. Willy Ley, Space Scientist

Stan Kenton Orchestra

Hans Conreid, Actor and Lecturer

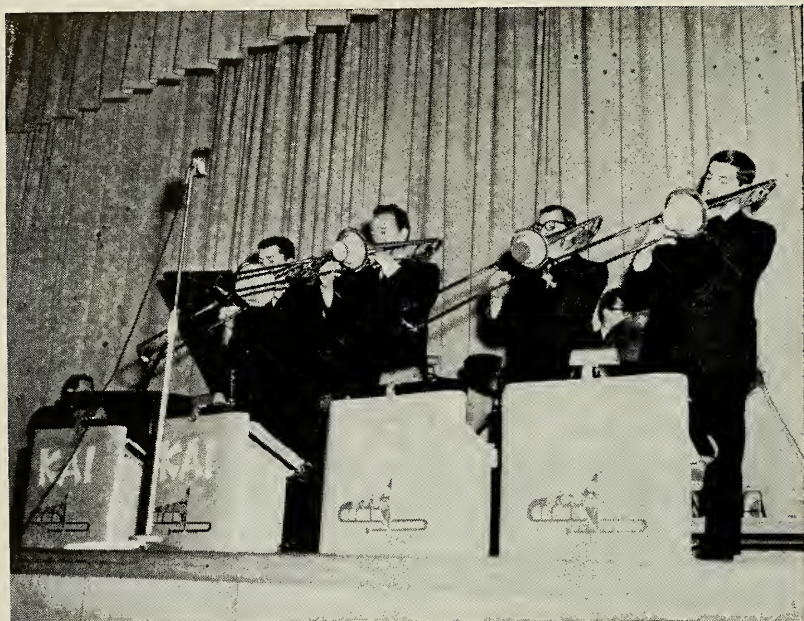
The Carridines, Theatre of Great Characters

Goya and Mateo Dance Team

Rafael Mendez, Trumpeter

Robert Lowry, Clarinetist

James Burke, Trumpeter



Jazz great Kai Winding swept the Campus with his music

Social Program

The purpose of the extensive and varied activities program is that of making the students' college life richer and more enjoyable. The social functions are financed from allocations of student activity fees made by the Student Senate and managed by the Social Committee. This committee consists of an equal number of student and faculty representatives. Persons who are not enrolled in the college are admitted to parties, dances, and other events only as guests of regular students or faculty members.

Among the major events of the year are the Cook Forest Picnic, Homecoming Day, Christmas Formal Dance, Winter Capades, Greek Sing, Inter-fraternity-Panhellenic Dance, Spring Carnival, Alumni Weekend and the Spring Prom. During the year there are faculty-student coffees, receptions, teas, banquets, luncheons, and special dinners. These activities center in the Harvey Gymnasium, Student Union, residence hall lounges, and the College Dining Room.

Sororities. Greek letter social organizations offer an enhancement to life outside the classroom for those students

who accept the responsibilities involved in membership. Sororities provide an opportunity for women students to develop close friendships within a group whose aims are common to their own. They promote scholarship, cultural interests, service projects and participation in campus activities. The national sororities are Delta Zeta, Sigma Sigma Sigma, and Zeta Tau Alpha. The local sororities are Sigma Delta Phi and Beta Chi Upsilon.

Panhellenic Council is the advisory governing board for all Clarion State College sororities. The council promotes cooperation and coordination of activities and standards between the sororities and the fraternities. Two representatives from each of the five sororities on campus compose the membership of the Council. Two major social activities planned jointly by Panhellenic and Inter-fraternity Councils are the Greek Sing and the IFC-Panhellenic Dance.

Fraternities. Chapters of five national fraternities, Alpha Phi Rho, Phi Sigma Epsilon, Sigma Tau Gamma, Theta Chi, and Theta Xi, are located on the Clarion Campus. One local group, Alpha Gamma Phi, also contributes to the social program. Members of several of these organizations live in chapter houses located near the college campus.

Inter-fraternity council is the governing organization and is composed of representatives of the six fraternities. Under the provisions of its constitution, it is responsible for the coordination of pledging activities and the arbitration and adjudication of violations of college and fraternity regulations. In addition, it works actively with the Panhellenic Council to enhance the position and welfare of all Greek letter organizations on the campus.



The Queen is crowned at the big Homecoming Weekend football game.

Athletic Organizations

Athletics for Women. Provision is made for participation of all women students in many forms of athletics. Speedball, soccer, volleyball, basketball, baseball, tennis, riflery, archery, golf, hiking, and other sports are open to students. Minor activities in badminton, shuffleboard, and ping-pong are also available.

Intramural competition for women is sponsored by the Women's Athletic Council, which is an organization composed of women who have attained eligibility through a sports point system. The intramural program furnishes an opportunity for those with officiating as well as playing abilities. Coaching advantages offered in this way have helped some girls with summer camp problems in the techniques of directing sports.

Development of desirable traits of sportsmanship, leadership, and ability to work and play with others is promoted at all times. Personal skills and efforts toward their improvement by individuals are likewise encouraged through class intramural participation. The purpose of the program is to make it functional in the life of the individual in school and after graduation.

Athletics for Men. In addition to the required courses in physical education, men may receive extra-curricular credit by participating in intercollegiate and intramural athletics. Intercollegiate athletics include football, basketball, wrestling, riflery, baseball, golf, and tennis. Men participate on intramural teams in football, basketball, baseball, soccer, volleyball, badminton, table tennis, handball, and horseshoes. There are also available for recreational activities such facilities as skiing, tobogganing, archery, shuffleboard, and hiking.

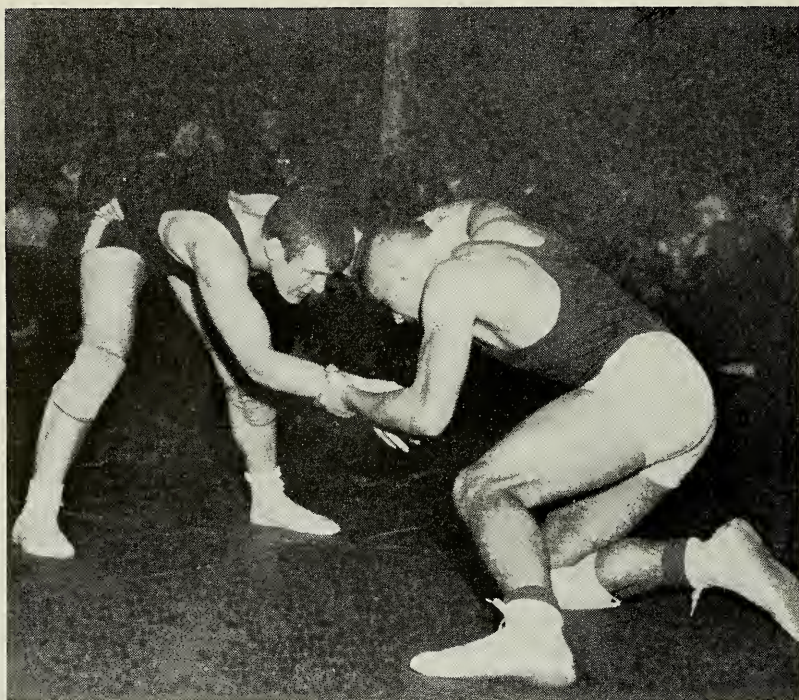
The college has six all-weather tennis courts on the campus. There are two athletic fields that provide for intercollegiate football, baseball, and intramural activities.

Through physical education courses, students are given fundamental knowledge of various sports and are taught how to coach these sports.

Clarion State College Rifle Club. This group was organized under the auspices of National Board for the Promotion of Rifle Practice through the Director of Civilian Marksmanship. The club is a charter member of the Western Pennsylvania Collegiate Rifle League and participates with other colleges in shoulder-to-shoulder matches. A small-bore rifle range is maintained by the college in Davis Hall where rifle practice is carried on each week. Special instructors' courses are offered

to enable students to become qualified Rifle Instructors under the National Rifle Association regulations.

Varsity "C" Club. The Varsity "C" Club is made up of men of the College who have earned the "C" in some one of the intercollegiate sports. Awards presented to all members are provided by the club.



Clarion's championship wrestling team furnishes many sports' thrills

The objectives of this club are to aid in the maintenance of pleasant relationships with other colleges and in the promotion of a high standard of conduct on the part of members of the athletic teams.

Men's Athletic Council. The Men's Athletic Council is an advisory body for the men's intercollegiate activity program. The Council consists of the Director of Athletics, four other faculty members, one member appointed by the Student Senate, and one member appointed by the Varsity "C" Club.

Musical Organizations

A Cappella Choir. Membership in the A Cappella Choir is by audition only. Auditions are held at the beginning of each semester and membership is open to any student who can satisfactorily pass the audition examination. The A Cappella Choir has a long and distinguished history as a performing group. The annual spring tour takes the choir to churches and high schools throughout Western Pennsylvania, where it presents both sacred and secular programs of the finest choral literature, from the early Polyphonic Period to works by contemporary composers. In addition, the A Cappella Choir serves the college campus by presenting major works such as **The Creation** by Haydn, in conjunction with the Clarion Area Symphony Orchestra; **The Messiah** by Handel; and the **Requiem Mass** by Cherubini. Selected members of the choir have sung in the production of **John Brown's Body** by Stephen Vincent Benet, **Amahl and the Night Visitors** by Gian-Carlo Menotti, and the musical, **Brigadoon**, by Lerner and Loewe. Projected performances include the **Elijah** by Mendelssohn, and a one-act opera. Rehearsals are held three times each week.

The Clarion State College Area Symphony provides opportunity for study and performance of selected works from the vast body of orchestral literature. In addition to students and faculty on campus, membership is open to talented high school students and adults in the outlying communities.

The Marching Band, a select group of 70 players, performs at all home football games, two away games, and other school and community events. Membership in this band is gained by qualifying auditions which are administered during the first week of the fall semester.

The Concert Band has no set number for membership. Members are chosen by audition. Symphonic band literature from the classical to the modern period is performed along with the standard band repertoire of overtures, marches, and modern transcriptions of recent Broadway shows. Concert Band activities include performance at concerts given by the College, appearance at community events, and an annual tour of high schools in the area. Qualified students in the marching band may become members of the concert band without further audition.

The Dance Band, a highly select group of about fifteen players, furnishes music for social functions at the College and other community affairs. A spring tour to local high schools is made annually.

Woodwind and Brass Ensembles are organized, depending on the talent and instrumentation which is available. Membership in these groups is voluntary.

The Madrigal Singers is a highly select group, made up of advanced students who possess the technique and voice which are vital to this specialized area of music. This group is a flexible one and varies in number from twelve to sixteen voices, depending upon the compositions to be performed. The literature presented by the Madrigal Singers represents some of the finest music ever written for voice. Madrigals, glees, airs, and anthems by Byrd, Weelkes, Wilbye, Dowland, Vecchi, and Caccini form a large part of the repertoire. The Madrigal Singers perform only on special occasions and for selected groups. In addition, the Singers present an annual concert in the College Chapel. Membership is by audition only.



Students build floats for the Autumn Leaf Festival parade

Professional Organizations

Alpha Phi Gamma, is a national honorary journalism fraternity. Members are chosen from the staff of the **Call** and the **Sequelle** and elected to membership for the outstanding contributions they have made to journalism at Clarion.

Alpha Psi Omega is a national honorary dramatics fraternity. Alpha Upsilon is the local chapter of Alpha Psi Omega at Clarion. In order to become a member of the fraternity, a certain number of points must be obtained through work both on and off stage.

College Players. The campus dramatic organization is known as the College Players. Opportunities for gaining experience in the various phases of play production are afforded through the regularly scheduled club programs and through public productions. By means of discussion and demonstration, members gain a working knowledge of the principles of stage lighting, costuming, makeup, acting, and directing. Membership in the organization is determined by competitive tryouts open to all.

The Players Studio is an organization which is devoted to the production of contemporary or experimental drama. Following each performance a panel discussion concerning the play and the production is held.

Bios Club is organized for biological science majors. Guest speakers from the Conservation Department, Fish and Wild Life, Forestry Department, professors from other colleges, and field trips are all part of the program designed to enrich the background of this natural science group.

Clarion State College Forensic Society is an organization whose purpose is to sponsor programs that furnish training and experience in public speaking, discussion, debate, extempore speaking, and interpretative reading. Among activities are programs and contests on the campus; appearances before civic, cultural, and educational groups; and participation in inter-collegiate debate tournaments and speech festivals.

Speech and Hearing Club is an extra-curricular organization maintained for the purpose of benefiting those students who are particularly interested in speech and hearing therapy. The program includes speakers from other schools, movies, slides, and field trips. Membership is open to all interested students.

Student Pennsylvania State Education Association seeks to develop and cultivate such desirable professional qualities as leadership, character, and scholarship among prospective teachers engaged in their pre-service preparatory work. Its purposes are exploratory, prevocational, and character forming, and its members can gain useful knowledge of the opportunities and requirements related to the teaching profession. The organization is unique in that it has the possibility of providing active participation in local, state, and national education associations. Membership is encouraged for college students in all curricula.

Through the S.P.S.E.A., the prospective teacher cultivates qualities of personality and character, develops enthusiasm for and loyalty to his chosen vocation, and acquires a sense of professional vision. Student members receive each month the journals of state and national education associations.

Membership in the local chapter of the S.P.S.E.A. should be esteemed an honor, an opportunity, and a personal responsibility of a professional nature. School superintendents and placement officials report that membership in the chapter frequently determines which candidate may be chosen for a specific teaching position.



College plays are a big part of Clarion's cultural activity.

Publications

The Clarion Call is the student-published college newspaper. It is published twice each month and follows a regular newspaper format and style. Staff participation is essential training for students with an interest in journalism education or advisement to school publications. Prior experience in jour-

nalism, while helpful, is not necessary for success. While certain editorial positions may receive financial remuneration, all qualified staff members will receive certificates of journalistic experience which will be included with their permanent records.

The Clarion, which is published under the guidance of the English Department, presents a channel of creative communication for those students whose interests and talents are in this area. This publication is the culmination of the year's best in creative writing by Clarion students.

The Sequelle is the college yearbook. The staff is comprised of students from all classes and curricula. Staff membership on this publication is invaluable to a student who plans to teach or work in this area during his professional career. With professional advice, the staff creates, plans, and produces the entire publication. Again, while certain editorial positions may receive financial remuneration, all staff members will receive certificates of journalistic experience which will become a part of their permanent records.

Religious Life

The Newman Club is a co-educational organization which provides for the spiritual and cultural heritage of Catholic students. Its activities are guided by a priest chaplain; its policies are suggested by the National Federation and the Regional Province of Newman Clubs, to which the chapter on Clarion Campus belongs.

The Student Christian Association holds weekly meetings on Wednesday evening. The students plan and conduct their own meetings. Each semester the association holds a reception for new students.

Sunday Schools connected with the various churches in Clarion have formed classes especially for college students.

Students are urged to make a choice of one of the churches in the town for regular attendance and to be present at the services in the churches so selected at least once each Sunday.

GENERAL INFORMATION

Accelerated Program

Students who take three summer terms of twelve weeks each may finish the four-year course in three years.

Automobiles

Freshman students under 21 years of age are not permitted to possess or operate automobiles while at college.

unless they are commuting from their homes outside the borough limits of Clarion. Other resident students who wish to have automobiles must secure permission through the Office of the Dean of Students.

All automobiles operated by students within the Borough limits of Clarion must be registered with the Office of the Dean of Students. Complete automobile regulations are included in the Student Handbook.

Course Numbering

Courses numbered **below 100** are usually of remedial nature.

Courses numbered **100 to 199** inclusive are primarily for Freshmen; **200 to 299** for Sophomores; **300 to 399** for Juniors; and **400 to 499** for Seniors. Courses numbered above the student's level may be taken with approval of the department head.

Courses with numbers **ending in 10 to 19** inclusive are General Education and those **ending in 20 to 29** are Professional Education.

Courses with numbers **ending in 30 to 49** inclusive are primarily for students in Elementary Education and those **ending in 50 to 69** are intended for majors in other fields.

The college reserves the right to change the sequence and numbering of courses.

Evening Classes

Thursday night classes are organized each semester for the convenience of regular students, in-service teachers, and others who may be interested in college courses. Work done in these courses gives customary college credit and may be applied toward a degree. A student may take two courses of three semester hours each semester or a total of six credits each semester.

Pennsylvania Regional Audio-Visual Library

Clarion State College serves as a distributing center for visual aids and equipment of the Pennsylvania Regional Audio-Visual Library.

Films, filmstrips, and other sensory aids held in this library contribute valuable resource material for the enrichment of courses of study in vocational and secondary education. Special fields in which materials are available include Vocational Agriculture, Vocational Homemaking, Vocational Trade-Industrial Education, and Vocational Guidance.

Materials and projection equipment may be rented by schools in the service area.

Student Responsibility for Academic Program

Each student is individually and personally responsible for learning the requirements of the curriculum which he is following and for seeing that these requirements are scheduled and completed for graduation.

The Summer Session

The Summer Session is maintained for the benefit of regular college students as well as for teachers in service. By taking advantage of the summer sessions, teachers can secure the professional training needed to meet the requirements for standard certification. Advanced courses are offered in the summer session for the benefit of teachers who desire to secure credits toward a degree in education or for permanent certification. Workshops are being added for those interested in special problems in education. Library Science certification may be added in three summers and Highway Safety in one summer. Liberal Arts courses are also part of the summer schedule.

Because of its location and environment, Clarion makes a strong appeal to those who desire to combine work with recreation during the summer. The mountain location provides a pleasant climate.

The Regular Summer Session of 1965 will open on June 28 and close on August 6. The Pre-summer session will be three weeks, from June 7 to June 25. The Post-session extends three weeks from August 9 to August 27.

ADMISSIONS

Admission of Freshmen

In accordance with the principles governing admission adopted by the Board of State College Presidents, five general requirements have been set up for admission to State Colleges:

1. General Scholarship.
2. Character and Personality.
3. Health and Physical Vigor.
4. College Entrance Examination Board Tests.
5. A Personal Interview.

Applicants for admission must satisfy the following requirements as outlined in detail below.

1. General scholarship as evidenced by graduation from an approved secondary school or equivalent preparation as determined by the Credentials Evaluation Division of the Pennsylvania Department of Public Instruction. The applicant must submit scores earned on the Scholastic Aptitude Test administered by the College Entrance Examination Board. Arrangements for taking these examinations are to be made through the high school guidance counselor.

2. Satisfactory character and personality traits as well as proper attitudes and interests as determined by the high school principal, guidance director, or other school official acquainted with the student.

3. Health and physical condition as evidenced by a health examination by the student's family physician reported on the official form and approved by the college physician. No student shall be admitted who has, in the opinion of the college, disabilities which would impair his service as a teacher.

4. Satisfactory personal and social qualities as determined by a personal interview with the applicant.

5. For admission to special curricula the college may require the applicant to take an appropriate aptitude test in the special field in order to obtain further evidence of ability to succeed in the chosen area.

Admission With Advanced Standing

Applicants transferring from other institutions will not be accepted without official transcripts of credit and certificates of honorable dismissal. All applicants are required to have an interview with an official of the college prior to the opening of the semester in which they wish to enter.

Credit will be given for acceptable courses pursued in accredited collegiate institutions in which the student has made grades of A, B, or C. Where the grades are marked on a percentage basis, work graded five per cent above the minimum passing grade will be accepted. Passing grades of "D" in other institutions will not be accepted. Course grades transferred from other institutions do not affect the quality point average a student earns at Clarion.

Students may not obtain a certificate or degree without a minimum residence of one year (thirty semester hours) in this College.

Teachers in service may complete in extension courses not more than 25 per cent of the courses required for a degree.

Applicants who are not graduates of an approved four-year high school, must have their credits evaluated by the State department of Public Instruction, Harrisburg, Pennsylvania. Applicants who need this type of evaluation should consult the Registrar of the College. This regulation applies to teachers in service.

All persons who were graduated from a State Normal School prior to September, 1920, and who have a four-year secondary school education will be granted no more than 64 semester hours of credit toward a degree for their normal school work.

No credit for public or private teaching experience, previously credited as high school equivalent or as equivalent professional credit toward graduation from a two-year curriculum, shall be granted toward meeting the requirements for entrance to or graduation from the four-year curriculums.

In accordance with a state regulation a maximum of six semester hours of credit may be completed in one semester while a person is engaged in full-time teaching.

No credit is given for correspondence work taken after September 1, 1927, except that pursued through the United States Armed Forces Institute or similar service organizations.

Admission of Freshmen in September, 1965

Applicants for admission to the freshman class in 1965 should read and observe carefully the following procedure:

1. Come or send to the Admissions Office of the College for the forms necessary in making application for admission. There are three of these: (1) the application and personnel record blank, (2) the report of the medical examination, and (3) the report from secondary school officials.
2. Bring or send the personnel record to the College along with an advance registration fee of \$10.00, payable to the Commonwealth of Pennsylvania. This fee is not refundable. Have the examining physician send the medical examination record to the College. The secondary school record will be sent directly to the College by the principal or other official of the secondary school.
3. Have a personal interview with an official of the college. The Admissions Office of the College is open between the hours of 8:30 A.M. and 5:00 P.M., Monday through Friday, and from 8:30 A.M. until 12:00 Noon on Saturday.

4. Have the College Entrance Examination Board send your Scholastic Aptitude Test scores.
5. Take the College Entrance Board Examination, if you have not already done so. Clarion State College is a testing center for these examinations, which will be given on the following dates: December 5, 1964, January 19, 1965, March 6, 1965, May 1, 1965, and July 14, 1965. These tests are now required for admission. Arrangements to take them may be made through the High School Counselor.
6. Clarion State College applicants may ask for a decision as early as July 1 following their Junior year. This would require the applicant to have taken the Scholastic Aptitude Test in the Junior year.

WITHDRAWALS

All class withdrawals must be made through the office of the Dean of Instruction. Classes from which a student withdraws during the first two weeks of a semester will not appear on his record. Withdrawals between the end of the second and sixth weeks may be made without penalty. After the beginning of the seventh week of a semester or during the second half of a summer session, a course from which a student withdraws and in which a grade of "E" is reported at the time of withdrawal shall be finally reported as a failure. If a withdrawal is not made through regular channels a failing grade will be entered for that course.

Any student who withdraws from the college either during or at the end of a semester must notify the Dean of Instruction of his intention to withdraw and the reason for withdrawal. This is necessary for completion of the student's permanent record. Failure to comply with this regulation will constitute an unofficial withdrawal and may affect the student's chances of future readmission or his obtaining an honorable dismissal.

SCHOLARSHIP REQUIREMENTS

Student progress is reported twice each semester. At the end of the first six weeks, each staff member submits to the registrar a report of all students doing unsatisfactory work in their classes. These reports are recorded and then passed on to the advisers who give them to the students. The advisers take this opportunity to analyze with the students any problems they may have and to help them improve their study habits or correct other difficulties which may have contributed to their low scholarship.

Grading System

- A indicates superior attainment.
- B indicates attainment above average.
- C indicates average attainment.
- D indicates attainment below average.
- E indicates failure.
- Inc indicates incomplete work.
- W indicates withdrawal from a course.

Inc (Incomplete) is not used unless a student has been in attendance through a semester or session. It indicates that the work of a student is incomplete and that the final grade is being withheld until the student fulfills all of the requirements of the course. It is used only when conditions and circumstances warrant and when evidence is presented to justify its being given.

All incomplete grades must be removed by the end of the following semester or they become failures.

Scholarship Requirements

Students whose failures in any semester or year amount to six or more semester hours shall not take all the regular work of the following semester or year. It is recommended that such students attend summer sessions to make up deficiencies.

A student shall be placed on academic probation to take effect the first semester following a semester during which his cumulative average becomes less than "C." If in the course of a probationary semester a student achieves a semester average of "C" or greater, but does not achieve a cumulative average of "C" or greater, he shall be continued on probationary status for an additional semester. If during a probationary semester a student fails to achieve a semester average of "C" or greater, he may be suspended for one full semester, the suspension to take effect the next following semester. Students who are placed on academic probation or suspension will be informed that a written report of their academic status will be forwarded to their parents or guardian, wife or husband, as the case may be.

Students shall not be assigned to student teaching unless they have a grade of "C" or better in English I and II, nor shall students whose recorded or reported failures amount to six or more semester hours in a field of concentration or in required general or professional education be assigned to such teaching. No student shall be assigned to student teaching unless he has a "C" average in his first and second fields and a cumulative average of "C" in all academic work.

Quality points will be assigned as follows: Grade A, 4 quality points per semester hour; B, 3 quality points per semester hour; C, 2 quality points per semester hour; D, 1 quality point; E, 0 quality points.

To qualify for graduation, students must have a "C" average.

A Junior Standing Program has been established to provide the student an opportunity to evaluate his educational progress and to determine whether he may reasonably be expected to complete his teacher education satisfactorily and be recommended for a teaching certificate.

Near the end of the sophomore year, a careful study is made of each student's academic record, physical condition, adviser's report, and results of the Sequential Tests of Educational Progress. Students who do not meet the standards at the end of the fourth semester are allowed two semesters and a summer to make up deficiencies.

FEES

I. Student Activity Fee

A Student Activity Fee is determined, collected, and administered under the direction of the Board of Trustees by the Clarion Students' Association. This fee, amounting to \$25.00 each semester, is to cover the cost of student activities in athletics, lectures, entertainments, student publications, and the like. The Student Activity Fee for the Regular Summer Session is \$3.00. Checks for these amounts must be drawn to the Clarion Students' Association, not to the Commonwealth of Pennsylvania.

II. Basic Fee

A. Basic Fees for residents of Pennsylvania, amounting to \$250.00 for Teacher Education students and \$300.00 for Liberal Arts students (\$125.00 and \$150.00 respectively per eighteen-week semester), shall be charged to cover registration and keeping of records of students, library, students' health service

(other than extra nurse and quarantine), and laboratory facilities. Checks in these amounts must be drawn to the Commonwealth of Pennsylvania.

Basic Fees for ten (10) or fewer semester hours of credit during a semester are as follows:

\$12.50 per hour for Teacher Education

\$15.00 per hour for Liberal Arts

For the summer sessions, Basic Fees are determined by the credit hour rates indicated above, with a minimum fee during any session of \$37.50 for Teacher Education and \$45.00 for Liberal Arts.

B. Students in the Library Science curriculum will be required to pay an additional fee of \$9.00 per semester to cover the cost of materials, supplies, equipment, and special services. For the six weeks summer session, this fee will be \$3.00. For part-time students in Library Science, this contingent fee for the special curriculum will be pro-rated on the basis of an 18-semester hour load.

C. Fees for students other than residents of Pennsylvania.

1. Basic Fee

\$20.00 per semester hour

2. Library Science Fee

Same as for Resident Student

3. Minimum Basic Fee

\$60.00

III. Housing Fees

A. For board, furnished room, heat, light, and limited laundry, the charge will be \$612.00 for the academic year. No reduction shall be allowed for absence of a few days from the college.

B. For damage, breakage, loss, or delayed return of college property the charges shall be equal to the extent of the loss.

C. The rental contract for college residence halls shall be for the academic year.

D. For students rooming off campus who board in the college dining room, board shall be \$162.00 per semester and \$9.00 per week during the summer sessions.

E. Cost of meals for transients: breakfast, 60¢; lunch, 85¢; dinner, \$1.25.

F. Transient lodging fee—\$1.50 plus tax per night per person.

IV. Miscellaneous Fees

A. Diploma Fee

A fee of \$5.00 is paid by each degree candidate to cover the cost of executing his diploma.

B. Schedule Change Fee

A fee of \$2.00 is charged for each change made in a student's original schedule for personal or other considerations.

C. Transcript Fee

One copy of a transcript of credit earned at the Clarion State College will be issued free of charge. A charge of \$1.00 is made for a second and each subsequent transcript. Persons desiring to have their credits transferred to another institution should give the name and address of such institution. Transcripts will not be issued for anyone who has unpaid bills, library fines or damage fees on his account.

D. Late Registration Fee

Each student registered after the date officially set for registration shall pay an additional fee of \$1.00 per day until the student is in regular attendance in accordance with the State regulation, provided that the total amount of the Late Registration Fee shall not exceed \$5.00. When permission for late registration has been secured from the President because of illness or any other unavoidable causes, this fee may be waived. The same regulation shall apply to inter-semester payments. Registration is not complete until all fees are paid.

E. Deposits

A deposit of \$25.00 shall be made by all students. This is a guarantee of the intention of the student to enter college for the term or semester designated. It is deposited with the Revenue Department to the credit of the student's basic fee for that semester. It should be noted by residence hall students that this deposit is in addition to the advance fee of \$72.00 for housing. These deposits are not refundable.

Applications for admission as either beginning freshmen or transfers must be accompanied by \$10.00 of this fee. It is not refundable. The remaining \$15.00 is payable upon receipt of notice of approval of the application.

Check or Money Order for these amounts must be drawn to the Commonwealth of Pennsylvania. All Post Office Orders must be drawn on the Post Office at Harrisburg.

V. Payment of Fees

All fees must be paid in advance and no student against whom there are any unpaid charges shall be allowed to enroll, graduate, or receive a transcript of record.

VI. Repayments

A. Repayments will not be made to students who are temporarily suspended, indefinitely suspended, dismissed, or who voluntarily withdraw from college.

B. Upon written request to the President of the College, a repayment will be made for personal illness, the same being certified by an attending physician, for the amount of the housing and basic fees paid by the student for the part of the semester which the student does not spend in college.

C. There shall be no repayment of any part of the Student Activity Fee for any cause whatsoever.

D. Refunds will not be made unless the student withdraws from school.

E. Students who start boarding will not be permitted to withdraw from the dining room during the semester unless they leave school.

VII. Summary of Fees

All fees are subject to change without notice.

**QUARTERLY PAYMENT PLAN
FOR STUDENTS LIVING AT THE COLLEGE
(Does not include Activity Fee)
First Semester**

Amount due September 8, 1964:

Basic Fee	{Teacher Education	\$ 62.50
	{Liberal Arts	\$ 75.00
Room, Board, and Laundry		\$153.00
Total due September 8	{Teacher Education	\$215.50
	{Liberal Arts	\$228.00

Amount due November 10, 1964:

Basic Fee	{Teacher Education	\$ 62.50
	{Liberal Arts	\$ 75.00
Room, Board, and Laundry		\$153.00
Total due November 10	{Teacher Education	\$215.50
	{Liberal Arts	\$228.00
TOTAL—First Semester ..	{Teacher Education	\$431.00
	{Liberal Arts	\$456.00

Second Semester

Amount due January 25, 1965:

Basic Fee	{Teacher Education	\$ 62.50
	{Liberal Arts	\$ 75.00
Room, Board, and Laundry		\$153.00
Total due January 25	{Teacher Education	\$215.50
	{Liberal Arts	\$228.00

Amount due March 29, 1965:

Basic Fee	{Teacher Education	\$ 62.50
	{Liberal Arts	\$ 75.00
Room, Board, and Laundry		\$153.00
Total due March 29	{Teacher Education	\$215.50
	{Liberal Arts	\$228.00
TOTAL—Second Semester	{Teacher Education	\$431.00
	{Liberal Arts	\$456.00
TOTAL FOR YEAR—	{Teacher Education	\$862.00
	{Liberal Arts	\$912.00

QUARTERLY PAYMENT PLAN
FOR STUDENTS NOT LIVING AT THE COLLEGE
(Does not include Activity Fee)

First Semester

Amount due September 8, 1964:

Basic Fee	{Teacher Education	\$ 62.50
	{Liberal Arts	\$ 75.00

Total due September 8	{Teacher Education	\$ 62.50
	{Liberal Arts	\$ 75.00

Amount due November 10, 1964:

Basic Fee	{Teacher Education	\$ 62.50
	{Liberal Arts	\$ 75.00

TOTAL—First Semester...	{Teacher Education	\$125.00
	{Liberal Arts	\$150.00

Second Semester

Amount due January 25, 1965:

Basic Fee	{Teacher Education	\$ 62.50
	{Liberal Arts	\$ 75.00

Total due January 25	{Teacher Education	\$ 62.50
	{Liberal Arts	\$ 75.00

Amount due March 29, 1965:

Basic Fee	{Teacher Education	\$ 62.50
	{Liberal Arts	\$ 75.00

TOTAL—Second Semester	{Teacher Education	\$125.00
	{Liberal Arts	\$150.00

TOTAL FOR YEAR	{Teacher Education	\$250.00
	{Liberal Arts	\$300.00

A student's books for a year cost between \$60 and \$80, depending on the courses he takes.

FINANCIAL ASSISTANCE

Scholarships

State Scholarships. Holders of the State Scholarships may attend Clarion. These scholarships are obtained by taking competitive examinations in the senior year in high school. The examinations are administered by County Superintendents of Schools.

H. W. Colegrove Scholarship Awards. A trust fund established at the First National Bank of Port Allegany by Mr. H. W. Colegrove provides for scholarships of \$100 each per year to be awarded to students from McKean County (Port Allegany section).

H. W. Colegrove Scholarship Loan Fund Trust. The will of Mr. Colegrove provides that the First National Bank of Port Allegany may make loans from his trust fund up to \$200 in any one year, and not more than \$500 to any one student, at the rate of 2% interest per annum while the borrower is attending school and 4% per annum after leaving school.

Mary Corbett Dixon Scholarship Fund. This fund is established for a ten-year period by Donald Corbett Dixon in memory of his mother, who was graduated from Clarion State College in 1903. A grant of \$200 each year will be paid the girl graduate of a Clarion County High School selected by the administration of the college. Criteria for selection are scholarship, need, and citizenship. Application must be made before May 1 of each year.

Elvira C. Moyer Scholarship Fund. A scholarship of \$130 a year established by Anna B. Lilly will be awarded annually to a student of the college selected by ballot by the teachers of the college.

Hannah Kent Schoff Memorial Scholarship. The Pennsylvania Congress of Parents and Teachers, through the Hannah Kent Schoff Memorial Scholarship Fund, is presenting 2 four-year scholarships valued at \$150 each per year or a four-year value of \$600 to each of the 14 State Colleges in Pennsylvania each year beginning September 1959. The Scholarship Committee of each State College will select the candidate for the scholarship assigned to its college upon the basis of ability, achievement, citizenship, need, and interest in preparing for the teaching profession. Those wishing to apply for the scholarship must already be accepted by the college. Scholarship applications must be made before March 1.

Oil City Lions Club Scholarship. This is an annual scholarship fund of \$250 available to a selected student from any Oil City high school or the Cranberry Area High School for use at the Venango Campus of Clarion State College. Details concerning application may be obtained from high school guidance counselors or from the Secretary of the Oil City Lions Club.

Oil City Adelphoi Club Scholarship. This is an annual scholarship of \$250 available to a selected student from any Oil City high school entering the Venango Campus of Clarion State College. Details concerning application may be obtained from high school guidance counselors or from the Secretary of the Adelphoi Club of Oil City.

The Theta Xi Foundation Scholarship. The Theta Xi Foundation of Pittsburgh has established a scholarship for four students which pays full tuition and fees for one semester. At least two of the grants must be made to a member of Theta Xi Fraternity; the others are open to any student in good standing at the College.

Loans

National Defense Student Loan Program. The National Defense Student Loan Program was authorized by the enactment of Public Law 85-864, the National Defense Education Act of 1958.

A borrower must be a full-time student in need of funds and must be capable of maintaining good academic standing. Special consideration is given students with superior academic background who desire to teach in elementary or secondary schools or whose academic background indicates a superior capacity in science, mathematics, engineering, or a modern foreign language.

A student may borrow for college expenses in one academic year a sum not exceeding \$1000 and during his entire course in higher education, a sum not exceeding \$5000. The borrower must sign a note for his loan. Repayment of the loan is to be completed within a 10-year period, this period to begin one year after the borrower ceases to be a full-time student. No interest on the student loan may accrue prior to the beginning of the repayment schedule, and interest thereafter is to be paid at the rate of three per cent per year. The borrower's obligation to repay his loan is to be cancelled in the event of his death or permanent and total disability. The act further provides that up to 50 per cent of the loan (plus interest) may be cancelled if the borrower becomes a full-time teacher in a public elemen-

tary or secondary school. The cancellation of the loan is to be at the rate of 10 per cent per year up to five years. Applications should be submitted to the Director of Admissions.

National Defense Education Act funds of \$152,817.00 were available for the 1963-64 school year. Ten per cent of this amount (\$15,281.70) was raised by gifts as a base for the NDEA grant.

Alumni and friends of the college have been most generous in their support of this project. The Fifty Year Classes of 1960 and 1961 and many organizations and individuals have contributed to make a grand total of \$420,000 available in government and matching funds in the past five years. In each case the sum contributed was multiplied ten times and the resulting sum was then available to students who needed loans.

Organizations and individuals making contributions of one hundred dollars or more are listed below.

Circle K Club	\$ 125.00
First Seneca Bank & Trust Company	2,500.00
Wallace Girling	8,700.00
Mrs. Elizabeth Judy	250.00
Kaffee Klatsch	100.00
Kiwanis Club	500.00
New Bethlehem Bank	3,000.00
Northwest Pennsylvania Bank & Trust Company	1,000.00
N. A. Rea Memorial Fund	500.00
Mrs. N. A. Rea	
Mr. & Mrs. William Rea	
Mr. & Mrs. Don Stroupe	
Zonta Club of Oil City-Franklin	100.00

United Student Aid Funds. United Student Aid Funds is a private, non-profit service corporation which endorses low-cost, long-term loans made by local banks to college students who have a financial need.

United Student Aid Funds serves as an intermediary between the student's hometown bank, which makes the loan, and the student's college, which underwrites the loan by depositing funds in the USA Funds reserve.

A borrower must be a full-time student in need of funds and must be capable of maintaining good academic standing. An applicant must apply to the Director of Admissions for a Letter of Introduction to the hometown bank. He may borrow in one academic year a sum not to exceed \$1,000.

United Student Aid Funds of \$125,000 were available for the 1963-64 school year. Contributions of \$1,000.00 each from The New Bethlehem Bank and The Merchants National Bank of Kittanning and \$3,000.00 from Mr. Wallace S. Girling made this fund possible.

Alumni Loan Fund. The Alumni Association is sponsoring a permanent fund to be known as the Clarion State College Student Loan Fund. It has empowered the First Seneca Bank and Trust Company of Clarion to place this fund on interest and to make loans from it according to recommendations by a committee, consisting of the President of the Board of Trustees, the President of the College, a member of the college faculty, and two alumni of the College. The Committee has passed the following regulations: No more than \$300 shall be loaned to any student during the four years. Interest shall be 4 per cent from the date of graduation or from the date the student leaves school. Students obtaining loans must have a scholastic average of at least "C."

The Loan Fund of the Clarion County Chapter of the D.A.R. The Clarion County Chapter of the D.A.R. has established a fund to be loaned to deserving students and administered by the Clarion County Chapter of the D.A.R.

The Lorena Given Memorial Fund. In memory of Lorena Given, former teacher at the College, a loan fund, amounting now to one hundred dollars, has been established and is administered by the Alumni Loan Committee.

The J. George Becht Memorial Loan Fund. In memory of J. George Becht, former President of the college, a loan fund, now amounting to one hundred dollars, has been established, to be administered by the Alumni Loan Committee.

The 1913 Class Loan Fund. The class of 1913 established in 1928 a loan fund of \$205.35, to be administered by the Alumni Loan Committee.

A. J. Davis Loan Fund. The A. J. Davis Loan Fund in the amount of \$362.20 is to be administered by the Alumni Loan Committee.

The R. H. Duntley Memorial Loan Fund. Miss Alice C. Duntley has established a loan fund in memory of her father, R. H. Duntley of the class of 1892 and a former Trustee of the College. It amounts to \$100 to be used as a loan to a senior student of Warren or McKean County and to be administered by the Alumni Loan Committee.

The Christine A. Dickinson Memorial Loan Fund. A loan fund of \$150 has been established as a memorial to Christine A. Dickinson, alumna of Clarion and for many years a teacher in the public schools of Ridgway, Pennsylvania. This fund is to be used preferably for elementary teaching students from Elk County and is to be administered by the Alumni Loan Committee.

The Wallace S. Girling Scholarship Fund. Mr. Wallace S. Girling has established a loan fund to be administered by a committee consisting of two faculty members and two lay members. It is the responsibility of the Committee to screen applicants and grant loans to deserving students.

The Frank L. Harvey Student Loan Fund. Loans from this fund, which totals \$1,000, will be made in terms of the following criteria: (1) The real need for such a loan, (2) the love of children and young people, (3) a modicum of ability, (4) an understanding heart, (5) a sense of responsibility.

Employment

The college desires to encourage self-supporting students, but it cannot promise sufficient work to any student to defray his full expenses. A limited number of part-time positions are available, chiefly to upperclassmen who have demonstrated ability to do satisfactory college work. A limited number of positions are available to new students; however, freshmen should plan to devote their full attention to adjustment to college life and academic requirements if at all possible.

Applications for part-time employment may be obtained from the Office of the Dean of Students.

DEGREE PROGRAMS

Clarion State College offers combined academic and professional education curricula leading to the degree of Bachelor of Science with certification for teaching in the public elementary and secondary schools of the Commonwealth of Pennsylvania and curricula in the liberal arts and sciences for those seeking the Bachelor of Arts degree.

Students working toward the Bachelor of Science degree may choose among curricula leading to certification in Elementary Education, Library Science, Public School Nursing, and Secondary Education. The area of Secondary Education offers fields of concentration in chemistry, comprehensive science, earth and space science, English, French, geography, history, mathematics, physics, social studies, Spanish, and speech.

Any student who earns certification in Elementary Education, Library Science, or Secondary Education may also include in his program a course of study that will extend his certification to include Safe Driving and General Safety Education or either of two areas of Special Education, Teaching the Mentally Retarded or Speech Correctionist.

Students in the liberal arts and sciences may choose among three broad area majors, each of which offers a variety of fields of specialization. The three major areas and the fields of specialization within them are listed below.

Humanities

Fields of specialization: art, music, foreign language, literature, philosophy, speech, theater arts. Students seeking a concentration in the Field of Speech may follow the core of the required subjects with specialization in General Speech, Oral Interpretation, Public Address, or Theater.

Natural Sciences and Mathematics

Fields of specialization: biology, chemistry, earth science, mathematics, and physics.

Social Sciences

Fields of specialization: economics, history, political science, and sociology-anthropology.

TEACHER EDUCATION

OBJECTIVES OF THE TEACHER EDUCATION PROGRAM

Clarion State College is officially maintained for the education and preparation of teachers for the public schools of Pennsylvania and for education in the arts and sciences.

Five curricula of specialized type are offered in professional education: library science; elementary education; secondary education; special education; and public school nursing.

Teacher preparation requires a program through which college graduates come to perform the offices of private person and public teacher in accord with qualities of good citizenship.

Therefore, each curriculum includes required studies in English expression, social studies, literature, fine arts, and science, all of which express our social heritage and convey customs and practices of a democratic kind.

Professional preparation in each curriculum is based upon adequate mastery of subject matter to give proficiency in teaching and upon adequate knowledge of psychology and philosophy to enable teachers to interest and instruct pupils.

Special Objectives:

1. To develop an understanding and appreciation of American democracy and the function of the public school in a democratic society.
2. To develop respect for the rights, responsibilities, and welfare of others.
3. To emphasize the moral, spiritual, and aesthetic values which will strengthen the individual in his personal and professional life.
4. To guide students so as to encourage them to enter the profession and continue in it.
5. To promote an understanding of children and youth in relation to their individual differences, the nature of the learning process, developmental behavior, and the interaction of the individual with the group.
6. To ensure the student's ability to read, write, and speak effectively.

7. To promote use of reflective thinking in problem solving.
8. To ensure that the student is capable of developing the scope and sequence of the courses of study within his areas of certification.
9. To provide college classroom instruction which is designed to help prospective teachers develop methodology for their own classrooms.
10. To encourage students to practice recreational activities, both physical and mental, for wholesome enjoyment of leisure time now and in later life.

Students who enroll in one of the Teacher Education Curricula may earn the degree of Bachelor of Science in Education with certification for library science, for teaching on the elementary or secondary level, or for public school nursing. Students may choose from the following curricula, all of which lead to the Bachelor of Science degree:

Curriculum in Elementary Education to prepare for teaching in the kindergarten, primary, and intermediate grades.

Curriculum in Secondary Education to prepare for teaching in junior and senior high schools.

Curriculum in Library Science Education to prepare for certification as school librarian.

Degree Curriculum in Public School Nursing to prepare registered nurses for certification as public school nurses.

A student who is enrolled in the Elementary, Secondary, or Library Science curricula may also take courses which will lead to certification in Safety Education or one of two fields of Special Education: Teaching of the Mentally Retarded or Speech Correctionist. Elementary certificates may be endorsed for elementary library science upon completion of 12 semester hours in the field.

CERTIFICATION

The Provisional College Certificate

Students who complete one of the teacher education curricula of the Clarion State College and who are awarded a baccalaureate degree are granted the Pennsylvania Provisional College Certificate, valid for three years of teaching in the

schools of the Commonwealth. Application for the certificate must be made and the certificate issued before graduates may teach in the public schools of Pennsylvania.

The Permanent College Certificate

The Permanent College Certificate requires three full years of successful teaching experience on the Provisional College Certificate in the public schools of this Commonwealth and the satisfactory completion of twenty-four (24) semester hours of post-baccalaureate education. Certificates issued prior to October 1, 1963, will continue to require twelve (12) semester hours of post-baccalaureate education for permanent validation. All permanent certificates require a basic course in the History of United States and Pennsylvania and a basic course in visual aids and sensory techniques.

Extension of Certificates

A certificate valid for the secondary school may be extended to include the elementary field on the completion of twenty-four semester hours of approved courses in the field of elementary education.

A certificate valid for the elementary school may be extended to include secondary subjects upon the completion of eighteen (18) to forty-six (46) semester hours of approved courses in a secondary subject, depending upon the area of specialization.

The holder of a certificate valid for the elementary school may have an endorsement of Library Science upon the completion of twelve (12) semester hours of approved courses in this field. This endorsement is valid only for the elementary school library.

The holder of a certificate valid for elementary education may have an endorsement of modern foreign language upon completion of six (6) semester hours in this field of study based upon practical techniques of speaking the language(s) with acceptable accent. The six (6) hours of study must rest upon adequate preparation in the language(s) as determined by the college.

Evaluation of Credits

Evaluations of the credits for students are considered valid only for the year in which distributions are made (year in which credits are earned). This situation exists because of changes in regulations governing the value of credits and in the requirements for certification and graduation frequently made by the State Department of Public Instruction, the State

Board of Education, and the Board of Presidents of the State Colleges. Students are urged to keep themselves well informed about their distributions by occasional inquiries at the General Office at times other than registration periods.

REQUIREMENTS

General Education

By regulation of the Pennsylvania State Council of Education, effective October 1, 1963, all applicants for certification to teach in the Commonwealth must have completed a minimum of sixty semester hours of acceptable courses in General Education. Students in all curricula will follow the same program. Deviation from the program is permitted for those who specialize in Science or Mathematics. Specialized courses in these fields may be substituted for the general requirements in science or mathematics.

Required courses in General Education are specified in the section headed "General Education—All Curricula."

Professional Education

Candidates for certification in elementary education must complete the Professional Education courses specified on page 55. Candidates for secondary certification are required to complete the Professional Education courses listed on page 56.

Areas of Specialization

Secondary majors must complete the requirements for a field of certification as outlined in the section entitled Course Distributions and, unless otherwise specified, minimum requirements for certification in a second field. It should be noted that methods courses can not be counted toward completion of an academic requirement.

Library Science majors will complete requirements for Library Science Certification and also the minimum requirements for certification in an additional field.

Elementary majors, in addition to completing the requirements for elementary certification, must take an academic major of 18 to 24 semester hours, of which 15 hours may be considered as part of general education. The academic major may be in a single subject such as history, in a broad field such as psychology or sociology, or in an interdisciplinary area such as the humanities, the social sciences, or the natural sciences. The requirement for the academic major may also be satisfied by an 18 to 24 hour concentration in a field of interest, such as Art, Library Science, Music, or Special Education.

Student Teaching

Those who major in secondary education are assigned to student teaching during either the seventh or eighth semester. Each secondary major will receive an assignment for a full day of student teaching throughout one semester at one of the public school student teaching centers cooperating with the college.

Those who major in elementary education are assigned to student teaching during either the seventh or eighth semester. Each elementary major will receive an assignment for a full day of student teaching throughout one semester at the Campus Training School or at one of the public school elementary student teaching centers associated with the college.

Student teachers are encouraged to reside throughout the semester in the community in which their student teaching center is located.

All student teaching assignments follow the public school calendar rather than the college calendar each semester.

The final grade in student teaching will be recommended by the cooperating teacher in consultation with the College supervisor and will be finally approved and reported by the College supervisor.

Public School Student Teaching Centers

Allegheny-Clarion Valley Joint Schools, Emlenton, Pennsylvania
Baden-Economy School District, Freedom Pennsylvania
Bradford Area Schools, Bradford, Pennsylvania
Brockway Area Joint Schools, Brockway, Pennsylvania
Brokenstraw Valley Schools, Youngsville, Pennsylvania
Brookville Area Joint Schools, Brookville, Pennsylvania
Butler Area Schools, Butler, Pennsylvania
Chartiers Valley Joint Schools, Pittsburgh 20, Pennsylvania
Clarion Area Schools, Clarion, Pennsylvania
Clarion Limestone Joint Schools, R. D. 1, Strattanville, Pennsylvania
Clearfield Area Schools, Clearfield, Pennsylvania
Cranberry Area Schools, Seneca, Pennsylvania
Curwensville Joint Schools, Curwensville, Pennsylvania
Dayton Joint Schools, Dayton, Pennsylvania
DuBois Area Joint Schools, DuBois, Pennsylvania
East Brady Area Schools, East Brady, Pennsylvania
East Forest Joint Schools, Marienville, Pennsylvania
Fairview Township-Karns City Joint Schools, Karns City, Pennsylvania
Ford City Union Schools, Ford City, Pennsylvania
Franklin Area Joint Schools, Franklin, Pennsylvania
Franklin Area Schools, Murrysville, Pennsylvania
Freeport Area Joint Schools, Freeport, Pennsylvania
Grove City Area Joint Schools, Grove City, Pennsylvania
Har-Brack Joint Schools, Natrona Heights, Pennsylvania
Johnsonburg Area Joint Schools, Johnsonburg, Pennsylvania
Kane Area Union Schools, Kane, Pennsylvania
Keystone Joint Schools, Knox, Pennsylvania
Kiski Area Joint Schools, R. D. 3, Leechburg, Pennsylvania
Kittanning Area Schools, Kittanning, Pennsylvania
New Kensington City Schools, New Kensington, Pennsylvania
North Clarion County Joint Schools, Leeper, Pennsylvania
Northern Butler County Area Schools, R. D. 2, West Sunbury, Pennsylvania

Oil City Area Schools, Oil City, Pennsylvania

Penn Hills School District, Pittsburgh 35, Pennsylvania

Pine-Richland Joint Schools, R. D. 1, Gibsonia, Pennsylvania

Pittsburgh City Schools, Pittsburgh, Pennsylvania

Punxsutawney Area Joint Schools, Punxsutawney, Pennsylvania

Redbank Valley Joint Schools, New Bethlehem, Pennsylvania

Reynoldsville-Sykesville Area Schools, Reynoldsville, Pennsylvania

Ridgway Area Public Schools, Ridgway, Pennsylvania

Shannock Valley Union Schools, Rural Valley, Pennsylvania

South Butler County Joint Schools, Saxonburg, Pennsylvania

St. Marys Area Joint Schools, St. Marys, Pennsylvania

Tarentum Borough Schools, Tarentum, Pennsylvania

Tidioute Area Joint Schools, Tidioute, Pennsylvania

Union Joint Schools, Rimersburg, Pennsylvania

Valley Grove Schools, Rocky Grove, Franklin, Pennsylvania

Warren Area Joint Schools, Warren, Pennsylvania

West Deer Township Schools, R. D. 1, Cheswick, Pennsylvania

West Forest Joint Schools, Tionesta, Pennsylvania

COURSE DISTRIBUTIONS

GENERAL EDUCATION—ALL CURRICULA

			c.h.	s.h.
Eng.	111	Composition I	3	3
Eng.	112	Composition II	3	3
Sp.	113	Fundamentals of Speech	3	3
Mus.	111	Introduction to Music	3	3
Art	111	The Visual Arts	3	3
Eng.	213	Introduction to Literature ..	3	3
Phil.	211	Introduction to Philosophy	3	3
Hist.	112	History of Modern Civilization	3	3
Hist.	212	Hist. of U. S. and Pa.—1865 to Present	3	3
P.S.	211	American Government	3	3
Soc.	211	Principles of Sociology (or)	3	(3)
Econ.	211	Principles of Economics	3	3
Biol.	111	Basic Biological Science	4	4
Ph.Sci.	111	Basic Physical Science I	3	3
Ph.Sci.	112	Basic Physical Science II	3	3
Math.	111	Basic Mathematics	3	3
Geog.	111	Basic Physical Geography	3	3
Geog.	257	Geog. of U. S. and Canada (or)	3	(3)
Geog.	254	Conserv. of Natural Resources	3	3
Psy.	211	General Psychology	3	3
HPE	111	Health Education	2	2
HPE	112,			
	211, 212	Physical Education for men (or)		
HPE	121,			
	221, 321, 421	for women; three semesters	2	1

Note: Elementary majors should schedule HPE 212E as a substitute for one of the above courses in Physical Education.

Elementary majors must substitute Music 131 for Music 111. They may schedule Music 111 as an elective.

All students may substitute more advanced courses in biology, physics, and mathematics for Biology 111, Physics 111 and 112, and Mathematics 111.

PROFESSIONAL EDUCATION—ELEMENTARY

(Required of all Elementary majors)

			c.h.	s.h.
Ed.	223	Social Foundations of Education . . .	3	3
Psy.	320	Human Growth and Development ..	5	5
Ed.	329	Audio-Visual Education	3	2
El. Ed.	323	Teaching of Reading	3	3
El. Ed.	324	Teaching of Arithmetic	3	3
Sci.	222	Teaching Science in Elementary Grades	2	2
Art	222	Teaching Art in Elementary Grades	3	2
Mus.	132	Literature and Materials of Music IIE	3	3
El. Ed.	325	Modern Curriculum and Methods ...	5	5
El. Ed.	422	Professional Practicum and School Law	2	2
El. Ed.	424	Student Teaching	30	12

THE CURRICULUM IN ELEMENTARY EDUCATION

(Sequence of courses subject to change for administrative reasons.)

1st Semester				2nd Semester			
Eng.	111:	Composition I	3	Eng.	112:	Composition II	3
Sp.	113:	Fundamentals	3	Biol.	111:	Basic	4
Ph.Sci.	111:	Basic I	3	Ph.Sci.	112:	Basic II	3
Math.	111:	Basic I	3	Geog.	111:	Basic	3
Hist.	212:	U.S. since 1865	3	HPE	111:	Health	2
HPE	112:	Phys. Ed.	2-1	Art	011:	Fundamentals	2-1
			17-16				17-16
3rd Semester				4th Semester			
Eng.	213:	Introduction	3	Ed.	223:	Social Found.	3
Mus.	131:	Lit. & Mat. IE	3	Mus.	132:	Lit. & Mat. IIE	3
Psy.	211:	General	3	Hist.	112:	Modern Civ.	3
Mus.	111:	Introduction	3	Art	111:	Visual Arts	3
Art	231:	Studio Experience	3-2	Art	222:	Teach. Art in El. Gr.	3-2
HPE	211:	Phys. Ed.	1	HPE	212:	Phys. Ed.	1
		Elective	3			Elective	3
			16-15				19-18
5th Semester				6th Semester			
Psy.	220:	Human Growth & Dev. ..	5	El.Ed.	325:	Mod. Curr. & Meth.	5
El.Ed.	324:	Teach. of Arith.	3	El.Ed.	323:	Teach. of Read.	3
Eng.	331:	Child. Lit.	3	Geog. 257 or 254:	U.S. & Can. or Cons.	3	
Sci.	231:	Fused Science	2	Sci.	222:	Teach. Sci. in El. Gr.	2
		Elective	3			Elective	3
			16-16				16-16
7th Semester (or 8th)				8th Semester (or 7th)			
P.S.	211:	American Government	3	El.Ed.	424:	St. Teach.	30-12
Phil.	211:	Introduction	3	El.Ed.	422:	Prof. Pract. & Sch. Law ..	2-2
Soc. 211 or Econ.	211:	Prin.	3				32-14
Ed.	329:	Audio-Visual Ed.	3-2				
		Elective	6				
			18-17				

PROFESSIONAL EDUCATION—SECONDARY

(Required of all Secondary Education and Library Science majors.)

			c.h.	s.h.
Psy.	222	Educational Psychology	3	3
Ed.	223	Social Foundations of Education	3	3
Psy.	321	Psychology of Adolescence ..	2	2
Ed.	321	Select course in Methods and Eval-		
to Ed.	328	uation in field of Specialization ..	3	3
Ed.	329	Audio-Visual Education ..	3	2
Ed.	422	Professional Practicum Including		
		School Law	2	2
Ed.	423	Library Practice and Student		
		Teaching (or)		
Ed.	424	Secondary Student Teaching	30	12

THE CURRICULUM IN SECONDARY EDUCATION

(Sequence of courses subject to change for administrative reasons.)

1st Semester

Eng.	111:	Composition I	3
Geog.	111:	Basic	3
Ph.Sci.	111:	Basic I	3
Math.	111:	Basic	3
HPE	112:	Phys. Ed.	2-1
HPE	111:	Health	2
			16-15

2nd Semester

Eng.	112:	Composition II	3
Sp.	113:	Fundamentals	3
Ph.Sci.	112:	Basic II	3
Hist.	112:	Modern Civ.	3
Biol.	111:	Basic	4
			16-16

3rd Semester

Psy.	211:	General	3
Art	111:	Visual Arts	3
Econ. 211 or Soc. 211:	Prin.		3
HPE	211:	Phys. Ed.	2-1
		Elective	6
			17-16

4th Semester

Eng.	213:	Introduction to Literature .	3
Mus.	111:	Introduction	3
Geog. 257 or 254:	U.S. & Can. or Cons. ..		3
Psy.	222:	Educational	3
HPE	212:	Phys. Ed.	2-1
		Elective	3
			17-16

5th Semester

Hist.	212:	U.S. since 1865	3
Phil.	211:	Introduction	3
		Elective	12
			18-18

6th Semester

Ed.	329:	Audio-Visual Ed.	3-2
Ed.		Meth. in Academic Field ..	3
Ed.	223:	Social Foundations	3
		Elective	9
			18-17

7th Semester (or 8th)

Psy.	321:	Adolescent	2
P.S.	211:	American Government	3
		Elective	12
			17-17

8th Semester (or 7th)

Ed.	422:	Prof. Pract. & Seb. Law ..	2
Ed.	424:	Student Teaching	30-12
			32-14

AREAS OF MAJOR SPECIALIZATION—SECONDARY THE FIELD OF BIOLOGY

(48 Semester Hours)

Required:			c.h.	s.h.
Biol.	153	General Biology I	6	4
Biol.	154	General Biology II	6	4
Biol.	263	Zoology	6	4
Biol.	264	Botany	6	4
Chem.	153	General Chemistry I	6	4
Chem.	154	General Chemistry II	6	4
Chem.	251	Organic Chemistry	6	4
Chem.	353	Biochemistry	6	3
*Ph.	251	General Physics I	6	4
*Ph.	252	General Physics II	6	4

Elective: (at least one course from each group)

Group I			c.h.	s.h.
Biol.	253	Ornithology	5	3
Biol.	254	Entomology	5	3
Biol.	255	Animal Ecology	5	3
Biol.	256	Field Zoology I	5	3
Biol.	257	Field Zoology II	5	3
Biol.	258	Conservation of Plant and Animal Resources	5	3
Biol.	351	Field Botany	5	3
Biol.	352	Plant Ecology	5	3
Biol.	357	Taxonomy of Vascular Plants	5	3
Group II			c.h.	s.h.
Biol.	259	Physiology	5	3
Biol.	261	Vertebrate Embryology	5	3
Biol.	262	Histology	5	3
Biol.	353	Comparative Vertebrate Anatomy	5	3
Biol.	354	Microbiology	5	3
Biol.	355	Parasitology	5	3
Biol.	356	Genetics	5	3
Biol.	360	Problems in Biology	5	3

No second field required.

*For courses in the field of Biology marked with an asterisk, Mathematics 161: College Algebra and Trigonometry is a prerequisite. Mathematics 151 and 152 may be substituted for 161.

Biology majors should not schedule Biology 111, Mathematics 111, or Physical Science 111 and 112 in their General Education programs.

THE FIELD OF CHEMISTRY (38 Semester Hours)

Required:			c.h.	s.h.
Chem.	151	Inorganic Chemistry I	8	5
Chem.	152	Inorganic Chemistry II	8	5
Chem.	251	Organic Chemistry I	6	4
Chem.	252	Organic Chemistry II	6	4
Ph.	251	General Physics I	6	4
Ph.	252	General Physics II	6	4
Chem.	352	Quantitative Analysis	7	3
*Chem.	354	Physical Chemistry I	6	4
*Chem.	355	Physical Chemistry II	6	4
Elective:			c.h.	s.h.
Chem.	253	Biochemistry	6	3
Chem.	254	Water Analysis	4	2
Chem.	256	Advanced Inorganic Chemistry I	5	3
Chem.	257	Advanced Inorganic Chemistry II	5	3
Chem.	258	Laboratory Techniques in Chemistry	3	2
*Ph.	353	Atomic Physics	6	4
Chem.	356	Colloidal Chemistry	6	3
Chem.	357	Instrumental Analysis	5	3
Chem.	358	Photomicrography	4	2
Chem.	359	Advanced Organic	6	3
Chem.	360	Radiation Techniques . . . (arranged)		2-3

No second field required.

*For courses in the Field of Chemistry marked with an asterisk, Mathematics 351 is a prerequisite. Majors in the field should understand that Mathematics 351 must be preceded by Mathematics 151 and 152 or 161, and Mathematics 251 and 252.

Chemistry majors should not schedule Mathematics 111 or Physical Science 111 and 112 in their general education programs.

THE FIELD OF COMPREHENSIVE SCIENCE (43-44 Semester Hours)

Required:			c.h.	s.h.
Biol.	153	General Biology I	6	4
Biol.	154	General Biology II	6	4
Biol.	263	Zoology	6	4
Biol.	264	Botany	6	4
Chem.	153	General Chemistry I	6	4
Chem.	154	General Chemistry II	6	4
Geog.	353	Descriptive Astronomy	3	3
*Geog.	252	Geology	3	3
*Geog.	353	Geomorphology	3	3
*Geog.	351	Meteorology	3	3
*Geog.	352	Climatology	3	3

Ph.	251	General Physics I	6	4
Ph.	252	General Physics II	6	4
Math.	151	College Algebra	3	3
Math.	152	Trigonometry	3	3

Note: Mathematics 161 may be substituted for Mathematics 151 and 152. Majors in Comprehensive Science should not include Biology 111, Mathematics 111, and Physical Science 111 and 112 in their general education programs. No second field required.

*One of these courses.

THE FIELD OF EARTH AND SPACE SCIENCE (24 Semester Hours)

Required:*			c.h.	s.h.
Geog.	111	Basic Physical Geography	3	3
Geog.	252	Geology	3	3
Geog.	351	Meteorology	3	3
Geog.	353	Descriptive Astronomy	3	3
Elective:			c.h.	s.h.
Biol.	153	General Biology I	6	4
Biol.	154	General Biology II	6	4
Biol.	263	Zoology	6	4
Biol.	264	Botany	6	4
Chem.	153	General Chemistry I	6	4
Chem.	154	General Chemistry II	6	4
Geog.	253	Geomorphology	3	3
Geog.	352	Climatology	3	3
Geog.	451	Cartography	4	3
Ph.	251	General Physics I	6	4
Ph.	252	General Physics II	6	4

*Earth and Space Science majors should schedule Mathematics 161 or Mathematics 151 and 152 instead of Mathematics 111 in their general education programs. Chemistry 153 and 154 and/or Physics 251 and 252 as part of the elective program in Earth and Space Science will replace Physical Science 111 and 112 in the general education requirement. Biology 153 and 154 and/or Biology 263 and 264 will replace Biology 111 in the general education requirement.

THE FIELD OF ENGLISH (36 Semester Hours)

Required:			c.h.	s.h.
Eng.	111	Composition I	3	3
Eng.	112	Composition II	3	3
Sp.	113	Fundamentals of Speech	3	3
Eng.	213	Introduction to Literature	3	3
Eng.	251	English Literature	3	3

Eng.	252	American Literature	3	3
Eng.	253	Philology and Grammar	3	3
Eng.	351	Advanced Composition	3	3
Elective:			c.h.	s.h.
Eng.	254	American Prose	3	3
Eng.	255	Pre-Shakespearian Literature	3	3
Eng.	256	Seventeenth Century Literature	3	3
Eng.	257	Novel to 1870	3	3
Eng.	258	Short Story	3	3
Eng.	259	Journalism	3	3
Eng.	331	Children's Literature	3	3
Eng.	352	American Poetry	3	3
Eng.	353	Shakespeare	3	3
Eng.	354	Eighteenth Century Literature	3	3
Eng.	355	Novel Since 1870	3	3
Eng.	356	Romantic Literature	3	3
Eng.	451	Contemporary Poetry	3	3
Eng.	452	Modern Drama	3	3
Eng.	453	Chaucer	3	3
Eng.	454	Victorian Literature	3	3
Eng.	455	Criticism	3	3
Eng.	456	English Honors Seminar	3	3
Eng.	457	Linguistics	3	3

Note: No second field needed if 6 hrs. in Reading are scheduled in addition to 36 hours in English. Courses meeting the Reading requirement are Education 221, 425, and 426 and Elementary Education 323.

FRENCH (30 Semester Hours)

Required:			c.h.	s.h.
Fr.	151	Elementary I	5	3
Fr.	152	Elementary II	5	3
Fr.	251	Intermediate I	3	3
Fr.	252	Intermediate II	3	3
Fr.	253	French Civilization I	3	3
Fr.	256	French Civilization II	3	3
Fr.	351	Advanced Grammar and Composition	3	3
Fr.	353	The Modern French Drama (or)	(3)	(3)
Fr.	354	The 20th Century French Novel	3	3
Elective:			c.h.	s.h.
Fr.	355	French Romanticism	3	3
Fr.	356	French Poetry from Baudelaire to Surrealism	3	3
Fr.	357	The French Realistic Novel	3	3

Fr.	358	The Literature of the Age of Enlightenment	3	3
Fr.	359	The Literature of the Classical Age	3	3

Note: No credit awarded for a 151 language course without completion of 152 course in same language. Exceptions for seniors and transfers with Department permission. Students completing 30 credits in one language may meet second field requirements with 12 credits in a second language.

THE FIELD OF GEOGRAPHY (24 Semester Hours)

Required:			c.h.	s.h.
Geog.	111	Basic Physical Geography	3	3
Geog.	257	Geography of U. S. and Canada	3	3
Elective: (at least one course from each group)				
Group I			c.h.	s.h.
Geog.	252	Geology	3	3
Geog.	253	Geomorphology	3	3
Geog.	351	Meteorology	3	3
Geog.	352	Climatology	3	3
Geog.	353	Descriptive Astronomy	3	3
Geog.	451	Cartography	3	3
Group II			c.h.	s.h.
Geog.	251	Economic Geography	3	3
Geog.	254	Conservation of Natural Resources	3	3
Geog.	255	Trade and Transportation	3	3
Geog.	354	Historical Geography of the U. S.	3	3
Group III			c.h.	s.h.
Geog.	256	Geography of Pennsylvania	3	3
Geog.	355	Geography of Soviet Union	3	3
Geog.	356	Geography of Europe	3	3
Geog.	357	Geography of Asia	3	3
Geog.	452	Geography of Latin America	3	3
Geog.	453	Geography of Africa and Australia	3	3
Geog.	454	World Problems in Geography	3	3

THE FIELD OF HISTORY (30 Semester Hours)

Required:			c.h.	s.h.
Hist.	151	History of Ancient and Medieval Civilization	3	3
Hist.	112	History of Modern Civilization	3	3
Hist.	251	History of U. S. and Pa. to 1865	3	3
Hist.	212	History of U. S. and Pa. since 1865	3	3

Note: Hist. 151 and 112 are prerequisites for all World and European history courses, and 251 and 212 for American.

Electives:

Group I: United States History			c.h.	s.h.
Hist.	354	Contemporary American History ..	3	3
Hist.	355	Economic History of the U. S.	3	3
Hist.	359	History of the American Frontier ...	3	3
Hist.	360	Colonial America ..	3	3
Hist.	361	History of American Science and Technology	3	3
Hist.	452	Diplomatic History of the U. S.	3	3
Hist.	456	Society and Thought in America to 1865	3	3
Hist.	457	Society and Thought in America since 1865	3	3
Group II: European History			c.h.	s.h.
Hist.	252	History of Europe before 1815	3	3
Hist.	253	History of Europe since 1815	3	3
Hist.	362	Ancient History	3	3
Hist.	363	Medieval History	3	3
Hist.	364	Renaissance History	3	3
Hist.	455	Culture of Europe (Educational Tour)		6
Group III: Regional and World History			c.h.	s.h.
Hist.	254	History of the Far East	3	3
Hist.	255	History of Latin America: Colonial Period	3	3
Hist.	255A	History of Latin America: National Period	3	3
Hist.	256	History of Pennsylvania	3	3
Hist.	257	History of the Near East	3	3
Hist.	357	History of England to 1689	3	3
Hist.	358	History of England since 1689	3	3
Hist.	365	History of Russia	3	3
Hist.	453	20th Century World History	3	3
Hist.	454	The British Commonwealth of Nations	3	3
Hist.	458	English Constitutional History	3	3
THE FIELD OF MATHEMATICS				
(24 Semester Hours)				

Required:			c.h.	s.h.
Math.	151	College Algebra	3	3
Math.	152	College Trigonometry	3	3
Math.	161	College Algebra and Trigonometry*	5	5
Math.	251	Analytic Geometry	3	3
Math.	252	Differential Calculus	3	3
Math.	253	Advanced College Algebra	3	3
Math.	351	Integral Calculus	3	3
Math.	352	Statistics	3	3
Math.	353	Synthetic Geometry	3	3

Elective:			c.h.	s.h.
Math.	254	College Geometry	3	3
Math.	255	Surveying	3	3
Math.	257	Mathematical Theory of Finance	3	3
Math.	261	Advanced Analytic Geometry	3	3
Math.	354	Theory of Equations	3	3
Math.	355	History of Mathematics	3	3
Math.	356	Modern Algebra	3	3
Math.	357	Modern Geometry	3	3
Math.	358	Computer Principles	3	3
Math.	450	Introduction to Symbolic Logic	3	3
Math.	451	Advanced Calculus	3	3
Math.	452	Differential Equations	3	3
Math.	453	Partial Differential Equations	3	3
Math.	454	Theory of Numbers	3	3
Math.	455	Boolean Algebra	3	3

*May be substituted for Mathematics 151 and 152 with Departmental approval.

THE FIELD OF PHYSICS (38 Semester Hours)

Required:			c.h.	s.h.
Chem.	153	General Chemistry I	6	4
Chem.	154	General Chemistry II	6	4
Ph.	251	General Physics I	6	4
Ph.	252	General Physics II	6	4
*Ph.	351	Mechanics	6	4
Ph.	352	Electricity and Magnetism	6	4
*Ph.	353	Atomic Physics	6	4
Ph.	354	Optics	5	3
Electives:			c.h.	s.h.
*Chem.	354	Physical Chemistry I	5	3
Geog.	353	Descriptive Astronomy	3	3
Ph.	253	Physical Measurements	5	3
Ph.	254	History of Physics	5	3
Ph.	257	Laboratory Techniques in Physics ..	3	3
Ph.	355	Electronics	5	3
*Ph.	356	Heat	6	4
Ph.	357	Demonstration in Physics	3	3
*Ph.	358	Electrical Measurements	5	3
Ph.	360	Major Concepts in Physics	3	3

No second field required.

*For courses in the Field of Physics marked with an asterisk, Mathematics 351 is a prerequisite. Majors in the field should understand that Mathematics 351 must be preceded by Mathematics 151 and 152 or 161, and Mathematics 251 and 252.

Majors should not schedule Mathematics 111 or Physical Science 111 and 112 in their general education program.

THE FIELD OF SOCIAL STUDIES

(48 Semester Hours)

A total of 48 semester hours are needed to complete the Comprehensive Social Studies Major. Of these 48 semester hours a minimum of 12 semester hours must be in history and a minimum of 6 hours in each of the other fields (Economics, Sociology, and Political Science).

No second field is required with the comprehensive social studies major. If a student with a major in another subject area, (English, Library Science, etc.) wishes to seek second field certification in one of the Social Sciences, a total of 24 semester hours must be completed in a **single** field. There is no comprehensive Social Studies minor and the state will **not** certify teaching in Comprehensive Social Studies for 18 or 24 hours.

Required:			c.h.	s.h.
Hist.	151	History of Ancient and Medieval Civilization ..	3	3
Hist.	112	History of Modern Civilization ..	3	3
Hist.	251	History of U. S. and Pa. to 1865 ...	3	3
Hist.	212	History of U. S. and Pa. 1865 to Present ..	3	3
Econ.	211	Principles of Economics ..	3	3
Soc.	211	Principles of Sociology ..	3	3
P.S.	211	American Government ..	3	3
Elective:			c.h.	s.h.
Econ.	212	Principles of Economics II ..	3	3
Econ.	351	Managerial Economics ..	3	3
Econ.	352	Aggregative Economics ..	3	3
Econ.	353	Elements of Statistics ..	3	3
Econ.	354	Money and Banking ..	3	3
Econ.	355	Industrial Relations ..	3	3
Econ.	356	Government Regulations ..	3	3
Econ.	357	Public Utilities ..	3	3
Econ.	358	International Economic Relations ..	3	3
Econ.	359	Public Finance ..	3	3
Econ.	360	Comparative Economic Systems ..	3	3
Econ.	451	Business Cycle ..	3	3
Econ.	452	History of Economic Thought ..	3	3
Econ.	453	Economics Seminar ..	3	3
Hist.	252	History of Europe before 1815 ..	3	3
Hist.	253	History of Europe since 1815 ..	3	3
Hist.	254	History of the Far East ..	3	3
Hist.	255	History of Latin America: Colonial Period ..	3	3

Hist.	255A	History of Latin America: National Period	3	3
Hist.	256	History of Pennsylvania	3	3
Hist.	257	History of the Near East	3	3
Hist.	354	Contemporary American History	3	3
Hist.	355	Economic History of U. S.	3	3
Hist.	356	Contemporary European History	3	3
Hist.	357	History of England to 1689	3	3
Hist.	358	History of England since 1689	2	3
Hist.	359	History of the American Frontier	3	3
Hist.	360	Colonial America	3	3
Hist.	361	History of American Science and Technology	3	3
Hist.	362	Ancient History	3	3
Hist.	363	Medieval History	3	3
Hist.	364	Renaissance History	3	3
Hist.	365	History of Russia	3	3
Hist.	452	Diplomatic History of U. S.	3	3
Hist.	453	20th Century World History	3	3
Hist.	454	The British Commonwealth of Nations	3	3
Hist.	455	Culture of Europe: Educational Tour		6
Hist.	456	Society and Thought in America to 1865	3	3
Hist.	457	Society and Thought in America since 1865	3	3
Hist.	458	English Constitutional History	3	3
P.S.	351	State and Local Government	3	3
P.S.	352	International Relations	3	3
P.S.	353	United Nations: Organization and Function	3	3
P.S.	354	Constitutional Law of U. S.	3	3
P.S.	355	Political Parties & Elections	3	3
P.S.	451	Comparative Government	3	3
Soc.	351	Contemporary Social Problems	3	3
Soc.	352	Home and Family Living	3	3
Soc.	353	Anthropology	3	3
Soc.	354	Cultural History of Africa and Asia	3	3
Soc.	355	Aboriginal North America	3	3
Soc.	356	Field Archaeology (arranged)		3

THE FIELD OF SPANISH

(30 Semester Hours)

Required:			c.h.	s.h.
Span.	151	Elementary I	5	3
Span.	152	Elementary II	5	3

Span.	251	Intermediate I	3	3
Span.	252	Intermediate II	3	3
Span.	255	Hispanic Civilization I	3	3
Span.	256	Hispanic Civilization II	3	3
Span.	351	Advanced Grammar and Composition	3	3
Span.	353	The Modern Spanish Drama or	(3)	(3)
Span.	354	The Modern Spanish Novel	3	3
Elective:			c.h.	s.h.
Span.	253	Commercial Spanish	2	2
Span.	353	The Modern Spanish Drama or	3	3
Span.	354	The Modern Spanish Novel	3	3
Span.	359	The Literature of the Golden Age ...	3	3
Span.	361	The History of Mexican Literature ..	3	3

Note: See notation under French on page 60.

THE FIELD OF SPEECH (24 Semester Hours)

Required:			c.h.	s.h.
Sp.	113	Fundamentals of Speech	3	3
Sp.	251	Voice and Diction	3	3
Sp.	252	Introduction to Speech Correction ..	3	3
Sp.	253	Introduction to the Theater	3	3
Sp.	256	Argumentation and Debate	3	3
Elective:			c.h.	s.h.
Sp.	114	Advanced Public Speaking	2	2
Sp.	115	Parliamentary Procedure	1	1
Sp.	254	Principles of Acting I	3	3
Sp.	255	Stagecraft and Lighting	3	3
Sp.	257	Advanced Debate	2	2
Sp.	264	Discussion	2	2
Sp.	311	Persuasion	3	3
Sp.	350	Summer Drama Workshop	6	6
Sp.	352	Play Direction	3	3
Sp.	354	Introduction to Oral Interpretation ..	3	3
Sp.	358	Psychology of Speech	3	3
Sp.	359	History of the Theater	3	3
Sp.	361	Principles of Acting II	3	3
Sp.	362	Principles of Stage Design	3	3
Sp.	363	Theatrical Costume and Makeup ..	3	3
Sp.	365	Advanced Oral Interpretation ..	2	2
Sp.	400	Oral Interpretation of the Bible ..	2	2
Sp.	401	Oral Interpretation of Elizabethan Literature	2	2
Sp.	402	Oral Interpretation of Greek and Roman Literature	2	2

Sp.	411	Classical Rhetoric	3	3
Sp.	412	British Public Address	3	3
Sp.	451	Advanced Speech	3	3
Sp.	453	Applied Phonetics	3	3
Sp.	454	Radio and Television	5	3
Sp.	455	Creative Dramatics	3	3

Note: Students seeking a concentration in the Field of Speech may follow the core of required courses with specialization in General Speech, Oral Interpretation, Public Address, or Theater. Course requirements and sequences may be determined by the student with the help of his adviser.

THE CURRICULUM IN LIBRARY SCIENCE EDUCATION

(Sequence of courses subject to change for administrative reasons.)

1st Semester

Eng.	111:	Composition I	3
Biol.	111:	Basic	4
Ph.Sci.	111:	Basic I	3
Geog.	111:	Basic	3
Hist.	112:	Modern Civ.	3
HPE	112:	Phys. Ed.	2-1
			<u>18-17</u>

2nd Semester

Eng.	112:	Composition II	3
Sp.	113:	Fundamentals	3
Ph.Sci.	112:	Basic II	3
Math.	111:	Basic	3
HPE	111:	Health	3-2
Geog.	257 or 254:	U.S. & Can. or Cons. .	3
			<u>18-17</u>

3rd Semester

Art	111:	Visual Arts	3
Eng.	213:	Introduction	3
L.S.	251:	Admin. of Sch. Lib. I ...	2
L.S.	253:	Book Selection I	3
HPE	211:	Phys. Ed.	2-1
		Elective	3
			<u>16-15</u>

4th Semester

Mus.	111:	Introduction	3
Psy.	211:	General	3
L.S.	252:	Admin. of Sch. Lib. II ...	3
L.S.	254:	Book Sel. II	3
HPE	212:	Phys. Ed.	2-1
		Elective	3
			<u>17-16</u>

5th Semester

Ed.	223:	Social Foundations	3
Ed.	329:	Audio-Visual Ed.	3-2
Hist.	212:	U.S. since 1865	3
L.S.	351:	Cat. & Class. I	3-2
L.S.	353:	Ref. Ser. I	2
Psy.	321:	Adolescent	2
		Elective	3
			<u>19-17</u>

6th Semester

L.S.	352:	Cat. & Class. II	3-2
L.S.	354:	Ref. Ser. II	2
L.S.	355:	Art for Sch. Lib.	2-1
P.S.	211:	American Gov.	3
Psy.	222:	Educational	3
Ed.		Meth. in Academic Field .	3
		Elective	3
			<u>19-17</u>

7th Semester (or 8th)

Ed.	422:	Prof. Pract. & Sch. Law ..	2
Ed.	424:	St. Teach. & Lib. Pract. .	30-12
			<u>32-14</u>

8th Semester (or 7th)

Econ.	211 or Soc. 211:	Prin.	3
L.S.	451:	Books & Libraries	2
L.S.	452:	Enrich. Mat.	2
Phil.	251:	Introduction	3
		Elective	6
			<u>16-16</u>

THE FIELD OF LIBRARY SCIENCE (24 Semester Hours)

Required:			c.h.	s.h.
L.S.	251	Administration of School Libraries I	2	2
L.S.	252	Administration of School Libraries II	3	3

L.S.	253	Book Selection I	3	3
L.S.	254	Book Selection II	3	3
L.S.	351	Cataloging and Classification I	3	2
L.S.	352	Cataloging and Classification II	3	2
L.S.	353	Reference Service I	2	2
L.S.	354	Reference Service II	2	2
L.S.	355	Art for School Librarians	2	1
L.S.	451	Books and Libraries	2	2
L.S.	452	Enrichment Materials	2	2
Elective:			c.h.	s.h.
L.S.	231	Administration of the Elementary School Library	3	3
L.S.	233	Book Selection for the Elementary School Library	3	3

ELEMENTARY LIBRARY SCIENCE (12 Semester Hours)

Recommended Courses:			c.h.	s.h.
L.S.	231	Administration of the Elementary School Library	3	3
L.S.	233	Book Selection for the Elementary School Library	3	3
L.S.	351	Cataloging and Classification I	3	2
L.S.	352	Cataloging and Classification II	3	2
L.S.	353	Reference Service I	2	2

Suggested Additional Courses: L.S. 253; 355; 451; 452 (see under secondary above)

Note: An elementary certificate may have an endorsement of library science with completion of 12 semester hours in the field. However, elementary majors choosing library science to fulfill the concentration requirement must schedule 18 to 24 hours in the field.

THE FIELD OF SAFE DRIVING AND GENERAL SAFETY EDUCATION (12 Semester Hours)

Required:			c.h.	s.h.
S.E.	351	Driver Education and Traffic Safety	3	3
S.E.	211	General Safety Education	3	3
Elective:			c.h.	s.h.
S.E.	212	Organization and Administration of Safety Education	3	3
S.E.	213	Materials and Methods of Teaching Safety in the Secondary Schools ..	3	3

S.E.	214	The Psychology of Accident Prevention	3	3
S.E.	215	Visual and Other Aids in Safety Education	3	3

Note: Any college certificate may be extended to include Driver Education and General Safety Education by completion of 12 semester hours of above courses. However, such course work will not fulfill second field requirements for secondary majors nor concentration requirements for elementary majors.

THE FIELD OF SPECIAL EDUCATION

Clarion State College is authorized to offer programs leading to certification in the following areas of Special Education:

1. Mentally Retarded (educable and trainable)
2. Speech Correction

Both elementary and secondary majors may extend their college certificates to include special education, and the field may be used to satisfy the area of concentration requirement for elementary majors or the second field requirement for secondary majors.

Teaching the Mentally Retarded

An elementary certificate may be extended to include Teaching the Mentally Retarded by completing the program listed below. A secondary certificate may be extended by following the same program with the addition of Teaching of Arithmetic (El. Ed. 324) and Teaching of Reading (El. Ed. 323).

			c.h.	s.h.
Psy.	332	Psychology of Exceptional Children	3	3
Spec.Ed.	220	Nature of Mental Retardation	3	3
Spec.Ed.	321	Curriculum Development for Exceptional Children (mentally retarded)	3	3
Spec.Ed.	422	Methods of Teaching Exceptional Children (mentally retarded)	3	3
Spec.Ed.	429	Student Teaching (mentally retarded)		6

Certification in Teaching the Mentally Retarded may be made permanent upon the completion of 6 additional semester hours in psychology related to exceptional children and 6 additional hours in methodology, curriculum and materials of instruction, and three years of satisfactory teaching experience. These credits may be part of the 24 hours required to validate a college provisional certificate to the permanent form. Credit requirements may be met with the following courses:

			c.h.	s.h.
Ed.	425	Diagnostic and Remedial Reading	3	3
Psy.	334	Abnormal Psychology	3	3
Psy.	335	Social Psychology	3	3
Sp.Cor.	452	Introduction to Speech Correction	3	3
Spec.Ed.	423	Curriculum Materials for Exceptional Children	3	3
Spec.Ed.	424	Laboratory Methods with Exceptional Children	3	3

Speech Correctionist

The provisional college certificate for Speech Correctionist may be earned by completing the program presented below. Course work should be taken in the sequence suggested, although certain courses may be taken concurrently.

			c.h.	s.h.
Psy.	332	Psychology of Exceptional Children	3	3
Psy.	323	Mental Hygiene	3	3
Sp.	252	Introduction to Speech Correction	3	3
Sp.Cor.	232	Clinical Phonetics	3	3
Sp.Cor.	431	Hearing Problems	3	3
Sp.Cor.	356	Speech Pathology	3	3
Sp.Cor.	421	Speech Reading and Auditory Training	3	3
Sp.Cor.	331	Speech and Hearing Clinic I: Practicum	7½	3

The provisional college certificate for the Speech Correctionist may be made permanent upon the completion of 12 semester hours of post baccalaureate work. Credit requirements may be met with the following courses:

			c.h.	s.h.
Psy.	331	Child Psychology	3	3
Sp.	334	Speech Correction for Elementary Children	3	3
Sp.	353	Speech Problems	3	3
Sp.	358	Psychology of Speech	3	3
Sp.Cor.	233	Anatomy of Speech and Hearing Mechanisms	3	3
Sp.Cor.	332	Speech Clinic II: Practicum	7½	3
Sp.Cor.	333	Curriculum Materials for Speech Correction	3	3
Sp.Cor.	432	Audiology	3	3

THE CURRICULUM IN PUBLIC SCHOOL NURSING (60 Semester Hours)

The curriculum in public school nursing, open only to persons who are Registered Nurses, leads to the degree of Bachelor of Science in Public School Nursing.

GENERAL EDUCATION

			c.h.	s.h.
Eng.	111	Freshman Composition I	3	3
Eng.	213	Introduction to Literature	3	3
Sp.	111	Fundamentals of Speech	2	2
Hist.	112	History of Modern Civilization	3	3
Hist.	212	History of U. S. and Pa. 1865 to Present	3	3
P.S.	211	American Government	3	3
Soc.	211	Principles of Sociology	3	3
Electives:				<u>12</u>
Total				<u>32</u>

PROFESSIONAL EDUCATION

Ed.	223	Social Foundations of Education	3	3
Psy.	211	General Psychology	3	3
Psy.	222	Educational Psychology	3	3
Psy.	321	Psychology of Adolescence	2	2
Ed.	329	Audio-Visual Education	3	2
Total				<u>13</u>

SPECIALIZED EDUCATION

N.	351	Public School Nursing	3	3
N.	352	Specialized Health Problems of School Aged Children	3	3
N.	353	Family Case Work	3	3
N.	354	Public Health Nursing	3	3
S.E.	211	General Safety Education	3	3
Total				<u>15</u>

VENANGO CAMPUS ELEMENTARY COURSE OFFERINGS

(Sequence of courses subject to change for administrative reasons.)

1st Semester

Eng.	111:	Composition I	3-3
Sp.	113:	Speech	3-3
Hist.	112:	Modern Civilization	3-3
Geog.	111:	Basic	3-3
Ph.Sci.	111:	Basic I	3-3
Math.	111:	Basic (Elem.)	3-3
<u>17-17</u>			

2nd Semester

Eng.	112:	Composition II	3-3
Hist.	212:	U.S. & Pa. since '65	3-3
HPE	111:	Health	2-2
Ph.Sci.	112:	Basic II	3-3
Biol.	111:	Basic	4-4
<u>17-17</u>			

3rd Semester

Mus.	111:	Intro. to Music	3-3
Soc.	211:	Prin. of Soc. (or)	3-3
Econ.	211:	Prin. of Econ.	(3-3)
Psy.	211:	General Psychology	3-3
Phil.	211:	Intro. to Philosophy	3-3
Mus.	011:	Fund. of Music	2-1
Ed.	223:	Social Found. of Educ.	3-3
<u>17-16</u>			

4th Semester

Eng.	213:	Intro. to Literature	3-3
Art	111:	The Visual Arts	3-3
Geog.	257:	Geog. of U.S. & Can. ..	3-3
(or)			
Geog.	254:	Cons. of Nat'l Res.	(3-3)
Sci.	222:	Teach. of Elem. Sci.	2-2
P.S.	411:	American Government	3-3
Art	011:	Fund. of Art	2-1
<u>19-18</u>			

VENANGO CAMPUS SECONDARY COURSE OFFERINGS

(Sequence of courses subject to change for administrative reasons.)

1st Semester

Eng.	111:	Composition I	3-3
HPE	111:	Health	2-2
Hist.	112:	Modern Civilization	3-3
Geog.	111:	Basic	3-3
Ph.Sci.	111:	Basic (or)	3-3
Chem.	151:	Inorganic I	(8-5)
Math.	111:	Basic (Sec.) (or)	3-3
Math.	151:	College Algebra	(3-3)
			<u>17-17</u>

2nd Semester

Eng.	112:	Composition II	3-3
Sp.	113:	Speech	3-3
Hist.	212:	U.S. & Pa. since '65	3-3
Ph.Sci.	112:	Basic II (or)	3-3
Chem.	152:	Inorganic II	(8-5)
Biol.	111:	Basic (or)	4-4
Math.	152:	Trigonometry	(3-3)
			<u>16-16</u>

3rd Semester

Eng.	213:	Intro. to Literature	3-3
Mus.	111:	Intro. to Music	3-3
Soc.	211:	Prin. of Sociology (or)	3-3
Econ.	211:	Prin. of Economics	(3-3)
Pay.	211:	General	3-3
Phil.	211:	Intro. to Phil.	3-3
Ed.	223:	Social Found. of Educ. (or) Elective	(3-3)
			<u>18-18</u>

4th Semester

Art	111:	The Visual Arts	3-3
Geog.	257:	Geog. of U.S. & Can.	3-3
		(or)	
Geog.	254:	Cons. of Nat'l Res.	(3-3)
Psy.	222:	Educational	3-3
P.S.	411:	American Government	3-3
		Elective	3-3
			<u>15-15</u>

Proposed Electives

Math.	251:	Analytic Geometry	3-3
Ph.	251:	General Physics I	6-4
Chem.	251:	Organic	6-4
Biol.	251:	Botany	6-4
		Foreign Language	3-3
Eng.	251:	English Literature	3-3

Math.	252:	Calculus I	3- 3
Ph.	252:	General Physics II	6- 4
Chem.	352:	Quant. Analysis	7- 3
Biol.	252:	Botany II	6- 4
		Foreign Language	3- 3
Eng.	252:	American Literature	3- 3

LIBERAL ARTS

OBJECTIVES OF THE LIBERAL ARTS PROGRAM

This curriculum has two prime purposes: to give a broad education in the liberal arts and sciences and to encourage depth in the approach to scholarship by those who aspire to advanced study.

To achieve the first objective, all candidates for the Bachelor of Arts degree must complete a program of general requirements. To attain the second objective, each student will select an area major in which he must complete an additional program of distributive electives. There are three major areas from which the student may choose: the Humanities; the Natural Sciences and Mathematics; or the Social Sciences. The remainder of a student's program may be devoted to further concentration or to free electives chosen in consultation with his faculty adviser.

CHARACTERISTICS OF THE CURRICULUM

The curriculum in the liberal arts and sciences at Clarion is concerned primarily with the pursuit of intellectual growth. It recognizes the individual nature of this growth and the importance of personal ideals and moral values. Consequently, the plan for the curriculum determines the framework within which each student selects his own program of courses in consultation with a faculty adviser.

ADMISSION AND FEES

Admission to the liberal arts and sciences program is governed by the admissions policy presented on pages 29-32 of the bulletin.

For Pennsylvania residents, a basic fee for the Liberal Arts Curriculum of \$150.00 for each semester of eighteen weeks shall be charged to cover registration and keeping of records of students, library, student health service (other than extra nurse and quarantine), and laboratory facilities. A check for this amount must be drawn to the Commonwealth of Pennsylvania.

The basic fee for six or fewer semester hours during a semester is \$15.00 per semester hour. (Minimum basic fee \$45.00).

All other charges are the same as those listed on pages 38 and 39.

PLAN OF THE CURRICULUM

The plan of the curriculum may be outlined as follows:

- I. General Education: a total of 63 credits required.
- II. Basic Requirements for Area of Concentration: 6 to 15 credits in those fields of the Area not presented in fulfillment of the general education requirement.
- III. Distributive Electives: a minimum of 24 to 27 additional credits in the Area of Concentration.
- IV. Free Electives: 22 to 28 credits.

GENERAL EDUCATION

The following general requirements must be met by all candidates for the A.B. degree: (Total is 63 credits.)

1. **English Composition:** 6 credits

2. **Foreign Language:** 12 credits

Proficiency in a foreign language at the second-year level is required. It must be demonstrated by passing two years of course work in any of the following: French, German, Russian, Spanish; or by passing a placement examination administered by the college.

3. **Humanities:** 15 credits

a. A minimum of 3 credits in each of the following fields with at least 6 credits in one:

Literature

Philosophy

b. Six credits in the fine arts, including 3 credits from at least two of the following fields:

Art

Music

Theater Arts or Speech

4. **Natural Sciences and Mathematics:** 15 credits

a. Three credits in Mathematics or Logic:

b. Twelve additional credits chosen from the following fields with at least 6 credits in one field:

Biology

Chemistry

Earth Science*

Mathematics

Physics

*Includes Geog. 111, 252, 253, 351, 352, 353

5. **Social Sciences:** 15 credits

Credits shall be distributed as follows:

Economics 3 credits

History 6 credits

Political Science .. 3 credits

Sociology or Psychology 3 credits

In addition to the 63 hours in general requirements outlined above, 4 credits in physical education are required.

MAJOR IN THE HUMANITIES

The program for the Bachelor of Arts degree with a major in the Humanities combines a broad requirement in general education with advanced study in literature, foreign languages, philosophy, speech and theater arts, music, and art. The program provides a rich cultural background and a wide range of preparatory work both for those students who regard a liberal education as preparation for the good life and for those who are undecided about their profession and seek the opportunity for forming a more mature judgment of their individual interests and aptitudes. The purposes of the program are achieved, first, through introducing the student to the broad area of the Humanities within the structure of the general education requirement and then by giving him a deeper understanding of several specific areas through fulfilling credit requirements in a number of fields within the Humanities.

General Education Requirements

The general education requirements for the major in the Humanities are the same as for all other students in the Liberal Arts.

Basic Requirements

Twenty-one hours, inclusive of the fifteen-hour general education requirement, must be completed with a minimum of six credits in Literature and Philosophy and three in each of the divisions within the Fine Arts.

Distributive Electives

Twenty-seven additional credit hours must be elected in such a manner as to assure at least fifteen credits in each of the following fields:

Fine Arts: Art, Music, Speech and Theater Arts
Foreign Language
Literature
Philosophy

Free Electives

Twenty-eight credit hours in the arts and sciences must be elected with the guidance of the student's adviser.

Concentrations

Within the Humanities major a student may pursue a concentration in English, French, German, Spanish, Russian, Music, Speech, Theater Arts, or Philosophy. Course requirements and sequences for these concentrations may be determined by the student with the help of his adviser.

MAJOR IN THE NATURAL SCIENCES AND MATHEMATICS

This curriculum has two objectives: to give a broad education in the fields of Natural Science and Mathematics and to encourage depth in the approach to scholarship by those who show an aptitude in scientific work and give promise of success in advanced study.

General Education Requirements

The general education requirements are the same as those for all other students in the Liberal Arts and Sciences except that the requirement in foreign language shall consist of twelve credits applied in such a way as to produce proficiency at the second year level in one of the following languages: German, French, or Russian.

Basic Requirements

Twenty-nine hours, inclusive of the general fifteen-hour requirement in Natural Sciences and Mathematics, must be so chosen that each of the following five fields will be represented:

- Biology
- Chemistry
- Earth Science
- Mathematics
- Physics

Distributive Electives

Twenty-five hours additional to the Basic Requirements must be scheduled and must include a sufficient number of the more advanced courses to promote a scholarly interest in the field. Courses must be elected in the fields of Biology, Chemistry, Mathematics, Physics, and Physical Geography.

Free Electives

Twenty-two additional credits in the arts and sciences must be elected in consultation with a faculty adviser.

Concentrations

Within the Natural Sciences and Mathematics major a student may pursue a concentration in Biology, Chemistry, Earth Science, Mathematics, or Physics. Course requirements and sequences may be determined by a student with the help of his adviser.

MAJOR IN THE SOCIAL SCIENCES

The Comprehensive Social Science major seeks to provide both breadth and depth of learning within the area. Breadth of knowledge is achieved through the requirement of basic courses dealing with the history of man and with various aspects of his society; i.e., Economics, Political Science, and So-

ciology or Psychology. Depth of understanding is secured through the development and use of scholarly techniques and critical thinking in advanced courses in one or more of the fields.

This major provides a sound basis for graduate work and also offers valuable preparation for such vocations as social work of a non-professional nature, as boy scout or girl scout work; junior executive or managerial training programs in business; and civil service.

General Education Requirements

The general education requirements for the major in the Social Sciences are the same as those for all other students in the Liberal Arts except that the requirement of fifteen hours in the Social Sciences shall be distributed as follows:

			Semester Hours
History: 6 Semester Hours			
Hist.	151	History of Ancient and Medieval Civilization	3
Hist.	112	History of Modern Civilization	3
Econ.	211	Principles of Economics	3
P.S.	211	American Government	3
Soc.	211	Principles of Sociology	3
or			
Psy.	211	General Psychology	3

Basic Requirements

Thirty hours, inclusive of the fifteen-hour general education requirement in the Social Sciences, must be completed with the following distribution of courses and credit hours:

			Semester Hours
Economics:			
Econ.	211	Principles of Economics I	3
Econ.	212	Principles of Economics II	3
History:			
Hist.	151	History of Ancient and Medieval Civilization	3
Hist.	112	History of Modern Civilization	3
Hist.	251	History of United States to 1865	3
Hist.	212	History of United States 1865 to Present	3
Political Science:			
P.S.	211	American Government	3
One elective (P.S. 352 International Relations recommended)			3

Sociology and Psychology:

Soc.	211	Principles of Sociology	3
One elective in Sociology			3
or			
Psy.	211	General Psychology	3
One elective in Psychology			3
or			
Soc.	211	Principles of Sociology	3
Psy.	211	General Psychology	3

Distributive Electives

In addition to the basic thirty-hour course requirement, a minimum of twenty-four credits of course work must be completed with at least twelve credits in courses at the 300 or 400 level. Courses must be chosen from the following fields: Economics, History, Political Science, Sociology, and Psychology.

Free Electives

Twenty-two additional credits in the arts and sciences must be elected in consultation with a faculty adviser.

Concentrations

Within the Social Science major a student may pursue concentrations in Anthropology-Sociology, Economics, History, or Political Science. Course requirements and sequences for these concentrations may be determined by a student with the help of his adviser.

COURSE DESCRIPTIONS

ART

The courses of the Art Department are structured to develop an understanding of the place of the visual arts in education and society. Specific courses related to public school art at the elementary level emphasize the relationship of Art to other curricular areas, investigate creative growth, and provide studio experiences in various media and processes.

Elementary majors may also pursue a Field of Concentration in Art. Courses in this area are designed to provide broader understandings of the function of Art in a contemporary society.

A strong elective program is available to any student, regardless of curriculum, and affords advanced work in both two and three-dimensional expression.

Art 011: Art Fundamentals

1 s.h.

A course in the fundamentals of art expression. Principles of design and their application to art products are discussed and made meaningful through studio work. Techniques and various approaches to basic skills in drawing, color, texture, form and space are given attention.

Art 111: The Visual Arts

3 s.h.

The great trends in the visual arts, both past and contemporary, and their relationship to society are studied. An examination of the nature of creative artistic expression is made. Emphasis is also given to the utilitarian aspects of art. These include architectural design, community art forms, products of an industrial society, and commercial uses of art. Studio experiences are provided to assist the student in forming a deeper understanding and sensitivity to all art forms.

Art 231: Studio Experiences in Art Processes

2 s.h.

This is a basic course designed to develop sensitivity and insight into art media and processes. Students develop skills, imagination, and techniques to increase understandings in the visual forms. Various projects make use of crayons, chalk, tempera, watercolor, clay, sculptural media, printing techniques, and scrap materials. Work is both two and three-dimensional. Prerequisite: Art 011 or equivalent preparation.

Art 222: Teaching Art in the Elementary Grades

3 s.h.

The place of art in the elementary public school curriculum is studied and discussed. Lectures center around the creative growth and development of the child at different age levels and the fusion of art with the life experiences of the child. Techniques of lesson planning, presentation, and classroom procedure at the elementary level are developed and utilized in actual teaching situations. Discussions, observations in schools, individual research problems, written reports, and visual materials provide broad practical experiences. Prerequisite: Art 231 or equivalent preparation.

Art 232: Experimental Art Techniques

3 s.h.

The primary aim of this elective course is to develop expression in drawing, oils, watercolor, casein, and the graphic arts. Investigations in some specific areas which meet student needs and interests are encouraged. Open to all curricula.

Art 233: Art Crafts

3 s.h.

This is a course with a dual purpose. First, it is an enrichment course meant to give vital experience with the arts and crafts to any college student. Second, it is to provide sufficient knowledge and skill for teaching of the arts and crafts in the elementary field. A great deal of freedom is given students in initiating their own proj-

ects and carrying them out. Stenciling, weaving, decorative painting, and modeling are only a few of the many offered.

Art 234S: Elementary Art Workshop 3 s.h.

A workshop designed to meet the needs of teachers in service. Emphasis is placed on newer approaches and presentations, art and other school subjects, materials, processes, and equipment used in today's elementary art program. Offered in summers only.

Art 235: Practical Problems in Art Education 3 s.h.

Practical problems in art education may be and usually are varied in nature. Some students require more information regarding methods of teaching and others feel that more art techniques are desirable. Whatever the students regard as problems are considered the objectives of the course and are studied to the point where students' needs are considered satisfied.

Art 236: Creative Design 3 s.h.

A study of the basic principles of line, color, and texture in both two and three dimensions. Creative approaches are stressed rather than formal principles. Major attention is placed on the exploration of materials and processes and their application to elementary activity.

Recommended for students pursuing Field of Concentration in Art.

Art 237: Drawing and Composition 3 s.h.

Problems in basic drawing and composition techniques in various media. Inventive interpretations from varied visual materials and imaginative approaches. Use of blackboard and other supports is emphasized. Recommended for students pursuing Field of Concentration in Art.

Art 390: Ceramics 3 s.h.

Design and construction of clay pieces in varied techniques and approaches. Basic clay and glaze technology, hand building, throwing, turning, and firing processes.

Art 311: Graphic Media and Techniques 3 s.h.

Broad experiences in a wide range of media and processes of graphic expression. Both old and new approaches in lino-cuts, wood block, etching, dry point, lithography, serigraphy, and exploration with new techniques.

Art 312: Handcrafts 3 s.h.

This course is structured to assist student development in basic craft media and processes. Attention is given to construction in varied materials, weaving, leather craft, textile work, model construction, and other related areas. The richer aspects of the plastic elements and design are emphasized.

Art 313: Crafts in the Elementary Schools 3 s.h.

Broad experiences with a variety of media common to today's elementary program. Commercially made and discarded materials for craft production are utilized and evaluated as to their potential and value. Source material is developed to assist in planning craft activity. A useful course for those engaged in summer playground work.

Art 315: Landscape Painting 3 s.h.

A basic course serving as an introduction to the problems of landscape painting. Use of oil, casein, watercolor, and mixed media in work taken directly from nature, imagination, and memory.

Art 316: Sculpture 3 s.h.

This course emphasizes the aesthetic, structural, and technical principles of three-dimensional form while stressing cast sculpture as a means of artistic expression. The student will experience direct control of clay, wax, plastic, wood and mixed media, while carrying out the various stages of casting in bronze, lead, and aluminum.

BIOLOGY

Biol. 111: Basic Biological Science

4 s.h.

This course deals with the principles of Biology. Topics include cellular structure and physiology, growth and repair, reproduction and development, control, sources of food energy, inheritance, and man's interrelationship with his biological environment. The classification of plants and animals is reviewed briefly.

Biol. 153: General Biology I

4 s.h.

This course is designed for Biology majors and is prerequisite to all other biology courses. Emphasis is placed on plant and animal metabolism, growth, reproduction, heredity, adaption, and evolution. Considerable attention is given to the chemical, physical, and biological organization of plant and animal life. Two hours lecture and four hours laboratory weekly.

Biol. 154: General Biology II

4 s.h.

A continuation of Biol. 153. These two courses are designed to provide the prospective biology major with a firm foundation for subsequent courses in the science of biology. Two hours lecture and four hours laboratory weekly.

Biol. 253: Ornithology

3 s.h.

An introduction to the birds of Pennsylvania with emphasis upon identification of birds in the field. Lectures deal with internal and external adaptation for aerial travel, classification, migration, habitats, plumage changes, nesting habits, and economic relations. Two lectures and three laboratory or field trip hours weekly.

Biol. 254: Entomology

3 s.h.

A general study of insects including structure, physiology, classification, economic importance, and relationship. Each student is required to complete a project including a collection and a report on some group of insects. Two lectures and one three-hour laboratory or field trip period weekly. Prerequisites: Biol. 153, 154.

Biol. 255: Animal Ecology

3 s.h.

A study of the interrelationships between animals and their environment. One lecture and two double-period laboratories. Prerequisite: Biol. 154.

Biol. 256: Field Zoology I

3 s.h.

This course deals with the study of invertebrates in the field and includes the collecting and preserving of such forms with emphasis on taxonomy. The course meets five hours a day with two extensive field trips required. Students are encouraged to make collections for future classroom use. Given in alternate summers.

Biol. 257: Field Zoology II

3 s.h.

This course deals with vertebrate forms (with the exception of birds), emphasis being placed upon ecological importance and taxonomy of the following groups: fishes, amphibians, reptiles, and mammals. The class meets five hours a day. Given in alternate summers.

Biol. 258: Conservation of Plant and Animal Resources

3 s.h.

A study of accepted practices in soil, water, forest, and game conservation with a biological approach. Extensive use of State and Federal consultants and films. Field trips include two weekends and several all-day trips.

Biol. 259: Physiology

3 s.h.

A course designed to give the student a general background of how animals carry on their bodily processes with special emphasis upon human physiology. Two lectures and one three-hour laboratory period weekly. Prerequisite: Biol. 154 and Chem. 154.

Biol. 261: Vertebrate Embryology

3 s.h.

A study of the development of the vertebrates, including the formation of germ cells, fertilization, growth and differentiation,

and the formation of tissues and organs. One lecture and two double-period laboratories. Prerequisite: Biol. 154.

Biol. 262: Histology 3 s.h.

A study of the microscopic structure of tissues comprising the organ system of animals, including man. One lecture and two double-period laboratories. Prerequisite: Biol. 154.

Biol. 263: Zoology 4 s.h.

A course for Biology majors designed to give the student a deeper understanding of the phylogenetic relationships of the invertebrates and vertebrates. The principles of organic evolution, animal classification, and levels of organization are stressed. Two hours lecture and four hours laboratory weekly.

Biol. 264: Botany 4 s.h.

The course examines in some detail the plant functions, including photosynthesis, biosynthesis, growth, inhibition, and rhythms. Includes discussion of phylogenetic relationships and evolutionary development in the plant kingdom. Two lecture and four laboratory hours weekly.

Biol. 351: Field Botany 3 s.h.

Methods useful in the study of plants in their natural surroundings. The use of keys, botanical manuals, and illustrated floras to identify living specimens will constitute a major activity. Among the desirable outcomes should be an acquaintance with non-cultivated plants as sources of emergency or staple foodstuffs, fibers, lumber, pollen and nectar, as well as their invaluable importance to wildlife. Two lectures and one three-hour laboratory or field trip period weekly. Given in alternate summers. Prerequisite: Biol. 264.

Biol. 352: Plant Ecology 3 s.h.

A study of the structure, development, and causes of distribution of plant communities based upon individual studies of the major plants in each group. Emphasis upon plant associations in western Pennsylvania visited during the course. Given in alternate summers. Prerequisite: Biol. 264.

Biol. 353: Comparative Vertebrate Anatomy 3 s.h.

The course presents the essentials for studying the basic structure of primitive chordates, traces the most important trends and their significance in the evolution of basic structures in various vertebrate lines, and conveys an appreciation of how the more advanced groups of vertebrates, especially mammals, came to possess the combination of characters that makes this group unique. The emphasis is upon evolution and continuity of structure. Laboratory work consists of the comparative dissection of the dog fish shark, Necturus, and the cat. One lecture and two double periods of laboratory work weekly. Prerequisites: Biology 153 and 154.

Biol. 354: Microbiology 3 s.h.

A study of microscopic forms of life with emphasis on the disease producing species in Man and his domesticated animals. Two lectures and three laboratory hours weekly. Prerequisite: 2 semesters of Biology and Chem. 154.

Biol. 355: Parasitology 3 s.h.

A study of parasites in relation to man and his domesticated animals. Emphasis is placed on morphology and life histories in addition to the ecology of the parasite. Two lectures and three laboratory hours weekly. Prerequisites: Biol. 153, 154.

Biol. 356: Genetics 3 s.h.

Acquaints students with the facts and principles of inheritance in plants and animals. In the laboratory, the primary experimental animal is the fruit fly with other forms introduced where possible.

Observations on the results of human heredity are introduced. Experiments and problematics are used to demonstrate the laws of heredity using elementary statistics as a means of evaluation. One lecture and two double periods of laboratory work weekly. Prerequisites: Biology 153 and 154.

Biol. 357: Taxonomy of Vascular Plants 3 s.h.

Systems of classification; collection and identification of flowering plants and ferns of the region; uses of keys and herbarium collections. Given in summers only.

Biol. 360: Problems in Biology 3 s.h.

Acquaints the student with skills and techniques used in research. Each student selects a problem for investigation and completes all phases including writing a research report. Admission by approval of the instructor.

CHEMISTRY

Chem. 151: Inorganic Chemistry I 5 s.h.

This course includes a chemical study of the structure and behavior of matter. Topics stressed are experimental evidence for the structure of atoms, electronic orbitals as related to chemical bonding, the periodic law, stoichiometrical relationships in problems and reactions, oxidation and reduction, gas laws, ionization, acids and bases.

Chem. 152: Inorganic Chemistry II 5 s.h.

This course continues the study of properties and uses of elements and their compounds as related to electronics structures; the study of colligative properties of solutions; and the qualitative analysis of the cations and anions.

Chem. 153: General Chemistry I 4 s.h.

This course includes a study of the structure and behavior of matter as related to pure substances with special emphasis on electronic orbitals and chemical bonding. It also devotes some time to the study of colligative properties of solutions, pH., and acids, bases and salts.

Chem. 154: General Chemistry II 4 s.h.

The course deals with the chemistry of carbon compounds: their classification and characteristics including aliphatic and aromatic compounds, carbohydrates, proteins, fats.

Chem. 251: Organic Chemistry I 4 s.h.

This course includes a study of the nomenclature, preparation and properties of aliphatic and aromatic hydrocarbons and the functional groups alcohols, halides, phenols, ethers, aldehydes, ketones, monocarboxylic acids, and such processes as polymerization, isomerization, alkylation, saturation, esterification. Prerequisite: Chem. 151.

Chem. 252: Organic Chemistry II 4 s.h.

This course continues the study of aliphatic and aromatic compounds with special emphasis on rules of orientation, sulfonic acids, aromatic aldehydes, acid ketones and acids, nitro and azo compounds, amines and acids, dyes and carbohydrates. Prerequisite: Chem. 251.

Chem. 253: Photography 3 s.h.

Practice in the photographic techniques of picture taking, composition, and processing constitutes the major part of this course with some emphasis on the physics of the camera and the chemistry of the film and photographic processing. Not counted toward Chemistry or Science majors.

Chem. 254: Water Analysis 2 s.h.

This course is a study of the impurities commonly found in water sources. The analysis for these impurities and elimination of them to prepare water for domestic consumption, industrial use, and aquatic life constitute the laboratory work.

Chem. 255: Industrial Chemistry 3 s.h.

This course deals with the application of theories, laws, and calculations of chemistry to industrial processes. The class work is supplemented by reading of current literature and trips to chemical industries.

Chem. 256: Advanced Inorganic Chemistry I 3 s.h.

The gross properties of molecules as well as their internal structure is studied as a function of the electronic structure of the component atoms. Special attention is given to the Brönsted-Lowry concept of acids and bases.

Chem. 257: Advanced Inorganic Chemistry II 3 s.h.

In this course special attention is given to atomic radii and charge as it affects the formation of complexes and complex ions and to the distribution of electrons in the orbitals as it affects the properties of the metals.

Chem. 258: Laboratory Techniques in Chemistry (Workshop) 2 s.h.

This course includes laboratory planning; selecting, care, and storage of equipment; making of solutions and various reagents from stock supplies. Setting up classroom demonstration for use in secondary schools is stressed. Prerequisite: Chem. 152.

Chem. 351: Qualitative Analysis 3 s.h.

This course is a study of the theoretical principles and practices underlying analytical chemistry. It includes study and practice in separating and identifying the cations and anions of the more common elements and radicals. Prerequisite: Chem. 152.

Chem. 352: Quantitative Analysis 3 s.h.

This course gives introductory training in the theory and practice of gravimetric, volumetric, electrolytic, and potentiometric analysis. Quantitative calculations and relations are stressed. Prerequisite: Chem. 152.

Chem. 353: Biochemistry 3 s.h.

This course deals with the chemistry of life processes including the chemistry of nutrition, digestion, blood, and various metabolisms of the human body.

Chem. 354: Physical Chemistry I 4 s.h.

This course is an introduction to the fundamental principles of theoretical chemistry with application in the solution of problems and training in the techniques of physical-chemical measurements. Prerequisite: Math. 351.

Chem. 355: Physical Chemistry II 4 s.h.

This course deals with surface chemistry and nuclear chemistry. Prerequisite: Math. 351.

Chem. 356: Colloidal Chemistry 3 s.h.

This course deals with chemistry of surfaces from both a theoretical and practical standpoint. Laboratory work is an essential part of this course.

Chem. 357: Instrumental Analysis 3 s.h.

This course deals with the role of instruments such as the spectrophotometer, polarimeter, polarigraph and refractometer in chemical analysis.

Chem. 358: Photomicrography 2 s.h.

A study of linear, areal, volumetric, and angular measurement under the microscope and crystallization techniques. Consideration is given to optical crystallization, refractive indices, and monclinic.

crystal problems and to spot reactions and newer developments in the instrumentation field. Related laboratory techniques are studied.

Chem. 359: Advanced Organic Chemistry 3 s.h.

This course consists of lectures dealing with chemical kinetics and electronic mechanisms of reactions and laboratory work dealing with special laboratory techniques and preparations. Five hours per week.

Chem. 360: Radiation Techniques 2-3 s.h.

Emphasis is placed on a program of independent study undertaken in the field of radiation chemistry under the direction of a member of the chemistry faculty. Representative topics included in the course are characteristics of isotopes, half-life, detection instruments, analytical applications and health physics problems. By arrangement.

ECONOMICS

Econ. 211: Principles of Economics I 3 s.h.

Introduction to economics, money and banking, pricing, and special economic groups. Prerequisite: sophomore standing.

Econ. 212: Principles of Economics II 3 s.h.

Pricing of outputs, degrees of competition, pricing of inputs, distribution, national income analysis, monetary and fiscal policies. Prerequisite: Econ. 211.

Econ. 351: Managerial Economics 3 s.h.

The purpose of this course is to show how economic analysis can be used in formulating business policies. The topics studied are: elements of decision theory and criteria for decision-making by the firm; output and "scale" decisions; linear programming; concepts of profits, production and cost functions, equilibrium (industry and firm) competition; demand theory; pricing policies; capital budgeting and investment decisions; analysis of uncertainty; and inventory management. Prerequisites: Econ. 211 and 212.

Econ. 352: Aggregative Economics 3 s.h.

National income accounting and analysis; economic indicators and measures; fluctuations and growth; the role of money in a dynamic economy; forecasting for the economy and the firm; and problems of public policy. The objective of this course is to develop in the student an awareness of the impact of dynamic forces on economic activity in general and specifically on the decisions which must be made by individuals and firms. Prerequisites: Econ. 211 and 212.

Econ. 353: Elements of Statistics 3 s.h.

The collection, analysis, interpretation, and presentation of statistical data. Frequency distribution, reliability, time series, and cyclical movements are studied. Emphasis is placed on the correlation, forecasting, and index numbers of statistical nature. Prerequisite: Economics 211.

Econ. 354: Money and Banking 3 s.h.

The nature of money and deposit credit, central banking, the U. S. banking system, the Federal Reserve Systems, the Treasury Department, and the U. S. monetary and fiscal policies make up the main part of this course. Prerequisites: Economics 211 and 212.

Econ. 355: Industrial Relations 3 s.h.

A study of union history, structure, and functions in the United States' economy. Collective bargaining, labor laws, and government policies toward labor are included. Management reaction to organized labor unions and related labor problems are stressed. Prerequisites: Economics 211 and 212.

Econ. 356: Government Regulations 3 s.h.

An examination of the major economic problems arising from public interest in competition, business practices, and labor. The anti-trust laws and regulations are included. Prerequisites: Economics 211 and 212.

Econ. 357: Public Utilities 3 s.h.

An analysis of public policies and methods regarding industries with a public interest with emphasis on transportation, power, and communication. The study of legal and financial aspects of public utilities are part of this course. Prerequisites: Economics 211 and 212.

Econ. 358: International Economic Relations 3 s.h.

Theory and practice of international trade. Balance of payments, foreign exchange, national commercial policies, international investment, and foreign aid are considered. Prerequisites: Economics 211 and 212.

Econ. 359: Public Finance 3 s.h.

A study of the American tax structure—federal, state, and local governments—and of the economic effects of various types of taxes and of government fiscal policy. Prerequisites: Econ. 211 and 212.

Econ. 360: Comparative Economic Systems 3 s.h.

Analysis of alternative patterns of economic control, planning, and market structure. Experiences under capitalism, socialism, and mixed economies are compared and evaluated. Prerequisites: Econ. 211 and 212.

Econ. 451: Business Cycles 3 s.h.

Theories of business fluctuations; applications of modern income theory to business cycles; patterns of cyclical behavior and of long-term economic change. Implications for public policy. Prerequisite: Econ. 359.

Econ. 452: History of Economic Thought 3 s.h.

This course traces the development of economic ideas from ancient times down to the present, with special emphasis on the period beginning with Adam Smith. Attention is given to the economic and political environment in which the ideas emerged and to important biographical details of some of the leading economists who advanced or held the ideas. Prerequisites: Economics 211 and 212 and Senior Standing.

Econ. 453: Economics Seminar 3 s.h.

This seminar deals with topics and problems in the field of economics which have been omitted or treated briefly in the formally organized course offerings. The topics to be analyzed will depend on the interests as well as preparation of the students. Students will be required to do independent work and make oral and written reports. Prerequisite: Economics Major and Senior standing.

EDUCATION

Ed. 221: Developmental Reading 3 s.h.

A broadly based course which emphasizes improvement in rate, comprehension, reading taste, and independence in quality and quantity of reading. Students are introduced to wide and varied sources of reading and numerous means of improvement in reading skills. Instruction in theory and an introduction to the possibilities of a supplementary mechanical program for reading improvement are included.

Ed. 223: Social Foundations of Education 3 s.h.

An introductory course to the social, historical, and philosophical foundations of education and to the relationship between schools and American society. Requirements and opportunities of professional careers in education are related to undergraduate and graduate programs of teacher preparation.

Ed. 224: Educational Tests and Measurement 3 s.h.

Professional techniques of educational testing procedures applied to the administration, construction, interpretation, and statistical computation of educational measurements. A first course.

Ed. 321: Methods of Teaching and Evaluating English 3 s.h.

This course gives consideration to the following: (1) the place of English in the curriculum of the free public school in America; (2) specific procedures for teaching and evaluating oral and written composition, English usage, and literature; (3) the school-wide English program; and (4) the administration of the school paper and the yearbook.

Ed. 322: Methods of Teaching and Evaluating French 3 s.h.

This course includes training in phonetics as well as in teaching procedures currently considered most effective at the secondary and also the elementary levels. Prerequisite: French 251.

Ed. 323: Methods of Teaching and Evaluating Geography 3 s.h.

A survey of available materials and current curricula in the field of geography form the basis for an analysis of modern techniques in the teaching of geography. Emphasis is placed on the nature, scope, and contributions of geography to general education. Time is devoted to the evaluation of recent textbooks, supplementary readers, government publication, magazines, maps, and pictures. The development of the best methods, techniques, and skills in the use of all teaching aids and in the guiding of pupils in their study is the leading objective of the course.

Ed. 324: Methods of Teaching and Evaluating Mathematics 3 s.h.

Place and function of mathematics in secondary education; content and the improvement and evaluation of instruction in mathematics; acquaintance with current literature and research; observation in secondary schools. Prerequisite: 9 hours of college mathematics.

Ed. 325: Methods of Teaching and Evaluating Science 3 s.h.

This course is planned to give the prospective science major a thorough grounding in the problems of teaching science. The objectives of the science program in the secondary school, selection of textbooks, sources of suitable literature, how to secure materials for instruction, the preparation of units, and special techniques are studied. Prerequisites: 12 hours of work in major field.

Ed. 326: Methods of Teaching and Evaluating Social Studies 3 s.h.

This course is intended to familiarize prospective teachers with desirable methods which may be used in teaching the social studies. Emphasis is placed on the philosophy, objectives, course of study, and organization of subject matter for teaching purposes, curriculum materials, procedures and development.

Ed. 327: Methods of Teaching and Evaluating Spanish 3 s.h.

Materials, methods, and problems are covered in the teaching of Spanish on the secondary level. Observations and readings in methodology are extra-class activities.

Ed. 328: Methods of Teaching and Evaluating Speech 3 s.h.

A Methods course designed to prepare seniors for student teaching. Consideration is given to such areas as: the place of speech in education, classroom procedures, diagnosis of speech needs, criticism of classroom speaking, evaluation of results of instruction, and supervision of extra-curricular activities. Prerequisites: 13 credits in Speech including Sp. 113.

Ed. 329: Audio-Visual Communication 2 s.h.

Audio-Visual Communication is the study of educational theory and practice concerned with the design and use of messages which control the learning process.

Ed. 422: Professional Practicum Including School Law 2 s.h.

Special attention to the practical application of techniques of

teaching and classroom management, comparison of techniques in specialized areas, typical problems encountered in student teaching, general principles of school law, and Pennsylvania school laws pertaining to the work of the classroom teacher. Limited to student teachers except by special arrangement.

Ed. 423: Library Practice and Student Teaching 12 s.h.

Two major assignments are required; the equivalent of one half time in public school library practice and the equivalent of one half time in classroom academic teaching, both under the supervision of approved cooperating librarians and teachers in public school student teaching centers affiliated with the college.

Ed. 424: Secondary Student Teaching 12 s.h.

Observation and participation in teaching and in activities related to the performance of a teacher's work, in the area of the student's specialization. Assignments for secondary student teaching are completed at off-campus public school student teaching centers associated with the college.

Ed. 425: Diagnostic and Remedial Reading 3 s.h.

Provides theory and practicum for the remediation of reading problems in the classroom, including skills, the use of tools, and methods with which to discover and correct the physical, emotional, and mental factors involved in reading problems. Prerequisite: El. Ed. 323 or Teaching Experience.

Ed. 426: Reading Problems in the Secondary School 3 s.h.

Consideration of the students who have reading disabilities. It proposes to prepare the teacher to plan corrective procedures which will eventuate the return of the student to his appropriate level of reading and comprehension in the diversified and comprehensive reading needs of the secondary school. Prerequisite: Ed. 425.

Ed. 431: Teaching the Exceptional Child 3 s.h.

A consideration of the problems connected with the education of the non-typical child — the mentally handicapped, the gifted, the blind, the deaf, the crippled, speech defective, and socially maladjusted. The selection, construction and adaptation of learning aids and materials.

ELEMENTARY EDUCATION

El Ed. 231: Creative Activities 3 s.h.

Exploration of the nature and value of creativeness, together with classroom opportunities for its development. Consideration of the unit of work and the guidance of children in creative learning and expression. Student participation in individual and group projects by which they demonstrate how creativeness can be fostered in the elementary school.

El Ed. 321: Child Development 3 s.h.

Acquisition of understanding and appreciation of the mental, physical, social and emotional aspects of development. Emphasis on techniques of motivation, principles of learning, the role of individual differences, and environmental factors affecting attitudes, personalities, growth and intellectual interests. Lectures, discussions, readings, and reports required.

El Ed. 323: Teaching of Reading 3 s.h.

An overview of the physiological and psychological aspects of reading and the materials and methods applicable for group and individual instruction in the elementary grades.

El Ed. 324: Teaching of Arithmetic 3 s.h.

This is a combination of a methods course and a professionalized subject matter course. Emphasis is placed upon the scope and sequential development of the arithmetic program, meaningful instruction in arithmetic, and available materials for implementing the arithmetic program. Problem solving, diagnostic work, and testing are stressed.

EI Ed. 325: Modern Curriculum and Methods**5 s.h.**

An integrated course coordinating theory and practice in the teaching of social studies, language arts, and health and physical education. Methods and materials applicable to unit type teaching, to the core curriculum, and to more traditional formations of the school are developed as emphasis is placed on the selection, organization, and evaluation of experiences and materials for elementary school children.

EI Ed. 332: Nursery-Kindergarten Education**3 s.h.**

Study of the function of pre-school and kindergarten programs in relation to the growth and development of children with a consideration of developmental and environmental influences on emotional problems. Study of the curriculum, physical environment, and such areas as music, literature, arts, science, creative expression, home-school relations, and dramatic play. Campus school experiences, directed reading, and films. Prerequisite: EI Ed. 321.

EI Ed. 422: Professional Practicum Including School Law**2 s.h.**

Problems, practices, and regulations attending student teaching professional experiences. Coordination of the student teaching program with the educational objectives of the student teaching centers. Pennsylvania school laws relevant to the work of the beginning elementary school teacher. Practical interpretations of professional ethics and the functions of professional organizations.

EI Ed. 424: Elementary Student Teaching**12 s.h.**

Observation and participation in teaching and in activities related to the performance of a teacher's work. The semester's program is divided into two student teaching assignments involving experience at two grade levels. Most assignments for elementary student teaching are completed at public school off-campus student teaching centers associated with the College.

ENGLISH**Eng. 111: Composition I****3 s.h.**

This course emphasizes library orientation, research writing, composition, style and usage, and the reading of literary types. In sections which require it, remedial work is done in punctuation, basic grammar, and spelling.

Eng. 112: Composition II**3 s.h.**

The course affords further practice in effective writing. Stress is placed on the organization of various types of expression through reading, discussion, and interpretation of selected literature. Continued functional practice in mechanics is taught when deemed necessary by the instructor. Reading includes study of two novels. Prerequisite: Eng. 111.

Eng. 213: Introduction to Literature**3 s.h.**

As an introduction to literature, this course is designed to provide opportunities for extensive reading which will familiarize students with the development of human thought as it has found expression in the recognized literary masterpieces of all times and peoples.

Eng. 251: English Literature**3 s.h.**

The course in English Literature is a survey of the literature of England beginning with Beowulf and moving through each literary and historical period. Representative selections from the recognized great in the literature of England are read. Emphasis is placed on the influence the history of the country has had upon its literature.

Eng. 252: American Literature**3 s.h.**

The work in American literature is a survey of the literature and the social history of America. Samples of significant work from American writers are studied.

Eng. 253: Philology and Grammar 3 s.h.

The course is devoted, first, to an intensive study of formal English grammar and, second, to a consideration of the historical background of the English tongue and the major sources of English vocabulary.

Eng. 254: American Prose 3 s.h.

The course in American prose considers both fiction and non-fiction work representative of American thinking and writing. Attention is given to social, political, and intellectual background related to selections studied.

Eng. 255: Pre-Shakespearian Literature 3 s.h.

This course is a study of the development of literature in England prior to 1600. Particularly treated are Beowulf, the Arthurian epics, Chaucer, Spencer and the medieval drama.

Eng. 256: Seventeenth Century Literature 3 s.h.

The course consists of study of John Milton and other important writers such as Bunyan, Walton, Donne, and various Cavalier and Puritan poets. The relation of the literature to the social, religious, and political history of the century is emphasized.

Eng. 257: The Novel to 1870 3 s.h.

The development of the novel in English as a major literary form is traced from its beginning in the mid-eighteenth century to Hardy and Twain through the reading and analysis of representative novels.

Eng. 258: Short Story 3 s.h.

The work of this course consists of lectures on the historical development of the short story followed by an intensive study of representative types. Class work is supplemented by extensive individual reading.

Eng. 259: Journalism 3 s.h.

A survey which provides theory and practice for all students who are interested in writing and other forms of journalism. Class contact with professional journalists and actual situations aids in bridging the gap between textbook theory and actual journalism practice.

Eng. 331: Children's Literature 3 s.h.

A study of the best in children's literature, both old and new, and the age when it is most appreciated. Students are acquainted with the history of children's literature, authors, illustrators, children's periodicals, and sources available for book selection. Wide reading of children's books, story telling, and oral reading are required. Recommended for elementary majors.

Eng. 351: Advanced Composition 3 s.h.

Advanced composition emphasizes writing experience in critical, expository, descriptive, argumentative, and creative work through intensive study of examples, frequent papers, and critical discussion of students' work.

Eng. 352: American Poetry 3 s.h.

The course is devoted to a study of the work of poets representative of American culture from the colonial period to the present.

Eng. 353: Shakespeare 3 s.h.

The work of this course is a study of selected comedies, tragedies, and historical plays by Shakespeare, together with the social, historical, and literary background necessary for their full appreciation.

Eng. 354: Eighteenth Century Literature 3 s.h.

Representative works of major Restoration and eighteenth century writers, such as Pepys, Dryden, Swift, Addison, Steele, Pope, Johnson, and Goldsmith, are considered in relation to the social, political, and intellectual climate of the age.

Eng. 355: Novel since 1870 3 s.h.

Through lectures and discussions the course examines trends in the development of the English and American novel since 1870. Six to eight representative novels are intensively studied.

Eng. 356: English Romantic Literature 3 s.h.

The major works of Wordsworth, Coleridge, Byron, Shelly, Keats, and their contemporaries are considered and related to the intellectual, political, and social currents of the time.

Eng. 451: Contemporary Poetry 3 s.h.

This course in contemporary poetry is devoted to consideration of representative verse published in both England and America since 1870.

Eng. 452: Modern Drama 3 s.h.

A comprehensive view of the best dramatic literature of the modern American and British theater since 1890 is presented through lectures, discussion, and experiences related to the contemporary stage.

Eng. 453: Chaucer 3 s.h.

The course is an intensive study of *The Canterbury Tales* and *Troilus and Criseyde* together with Chaucer's English and continental background.

Eng. 454: Victorian Literature 3 s.h.

The course in Victorian literature begins with a study of the many economic, social, religious, and political problems that disturbed nineteenth century England. The work of the major poets, essayists, and novelists is studied with particular care. Among the poets, Tennyson and Browning and the Pre-Raphaelites are given close attention. Novels representative of a half dozen of the most important fiction writers of the period are read and discussed.

Eng. 455: Criticism 3 s.h.

The course emphasizes a historical study of literary criticism and aesthetic theory with emphasis upon modern trends.

Eng. 456: English Honors Seminar 3 s.h.

Devoted to intensive study of selected writers and their works, the seminar is designed to offer excellent students opportunities for advanced and unusually challenging study in literature. Admission by Departmental invitation.

Eng. 457: Introduction to Linguistics 3 s.h.

The course presents the essentials of descriptive, historical, comparative, and structural linguistics and demonstrates the interrelationship between linguistics and other fields such as phonetics, semantics, and foreign languages. The course offers students an opportunity to increase their functional knowledge through study of vocabulary, tools, and applications of linguistics.

FRENCH**Fr. 151: French I (Elementary I)** 3 s.h.

Essentials of grammar, inductively presented. Emphasis on aural comprehension and oral expression, with extensive use of the language laboratory. Students may not receive credit for this course until French 152 has been successfully completed. Exceptions may be made for seniors and transfers upon the recommendation of the Department Head.

Fr. 152: French II (Elementary II) 3 s.h.

Continuation of French 151, with increasing emphasis on graded reading material. Prerequisite: French 151, or permission of the instructor.

Fr. 153: Elementary French Conversation 3 s.h.

Conversational practice, with extensive oral drill of grammatical patterns. Designed for those students who have met the prerequisites for French 251 but are lacking in aural-oral proficiency. May be taken concurrently with French 251.

Fr. 251: French III (Intermediate I) 3 s.h.

Brief systematic review of basic grammar; graded readings, conversation and composition on everyday topics. Prerequisites: French 152; or two years of high school study and/or a satisfactory placement test score.

Fr. 252: French IV (Intermediate II) 3 s.h.

Intensive reading of selected short stories and/or other works; outside reading, with oral and/or written reports. Prerequisites: French 251; or three years of high school study and/or a satisfactory placement test score.

Fr. 255: French Civilization I 3 s.h.

A survey of French geography, history, literature and culture, designed to equip teachers with the materials and understanding necessary to the presentation of the language as a rich, meaningful and integral part of a great civilization. Prerequisites: French 252; or four years of high school study and/or a satisfactory placement test score.

Fr. 256: French Civilization II 3 s.h.

Continuation of French 255, which is prerequisite. These two courses are required of all majors.

Fr. 351: Advanced French Grammar and Composition 3 s.h.

Intensive oral and written drill, with emphasis on finer points of grammar, colloquial and idiomatic usage. English-to-French translation, free composition, and conversation on everyday topics. Prerequisites: Same as for French 255.

Fr. 353: The Modern French Drama 3 s.h.

French drama from the 1890's to the present day. Playwrights principally treated are Maeterlinck, Claudel, Cocteau, Giraudoux, Anouilh, Sartre, Camus, Beckett, and Ionesco.

Fr. 354: The Modern French Novel 3 s.h.

A study of seven major French novelists of the 20th Century: Proust, Gide, Malraux, Mauriac, Sartre, Camus and Bernanos.

Fr. 355: French Romanticism 3 s.h.

A study of French Romanticism from Chateaubriand to the Revolution of 1848. Major figures: Chateaubriand, Stendhal, Balzac, and Hugo.

Fr. 356: French Poetry from Baudelaire to Surrealism 3 s.h.

A survey of the major trends in French poetry from Baudelaire to the early 20th Century, particularly Baudelaire, Rimbaud, Verlaine, Mallarmé, and Valéry.

Fr. 357: The French Realistic Novel 3 s.h.

A study of French realism and naturalism from the Revolution of 1848 to 1900. Major figures: Balzac, Flaubert, Zola, and Daudet.

Fr. 358: The Literature of the Age of Enlightenment 3 s.h.

Reading of essays, drama and fiction of the 18th Century. Major figures: Montesquieu, Voltaire, Diderot, and Rousseau.

Fr. 359: The Literature of the Classical Age 3 s.h.

Classical French philosophy, drama and poetry: Cornielle, Racine, Molière, Pascal, Descartes, La Fontaine.

GEOGRAPHY

Geog. 111: Basic Physical Geography 3 s.h.

A basic course organized to develop a knowledge and appreciation of the physical factors of the environment and man's adjustment to them. World patterns of land forms, climate, soils, vegetation, etc., are emphasized in relation to man's utilization of his spatial environment.

Geog. 251: Economic Geography 3 s.h.

A study of the production, distribution, and utilization of the world's basic commodities. Particular emphasis is placed upon the relationship of physical factors and economic conditions to the exist-

ence and distribution of the world's major occupations. World trade is also examined and special attention is given to trade routes, types of carriers, commodities carried, and their points of origin and destination. Prerequisite: Geog. 111.

Geog. 252: Geology 3 s.h.

A study which deals with all the features of the earth's surface and with the origin, composition, structure, and inhabitants of the earth. It has a two-fold division: one treats the rocks composing the earth, the movements within it, and its surface features and the agents that form them; the other traces the changing distribution of land and seas upon the earth and gives the story of the life inhabiting it.

Geog. 253: Geomorphology 3 s.h.

A study of the physical phenomena as dynamic forces affecting man. The content of the course consists of a systematic study of land forms, their origin, and the forces that produced them—soils, minerals, water resources—and their effect on man. Prerequisite: Geog. 252 (Geology).

Geog. 254: Conservation of Natural Resources 3 s.h.

The study of the utilization of the nation's resources of water, land, forests, wildlife, minerals, power, and man.

Geog. 255: Trade and Transportation 3 s.h.

The course is intended to develop an understanding of the interdependence of regions, nations, industries and the necessity for efficient transportation and communication. Factors that influence the type of transportation used are studied. Consideration is given to changes in methods of transportation and to possible future needs, such as Great Lakes-St. Lawrence Seaway, jet air service, and great circle routes. Prerequisite: Geog. 111.

Geog. 256: Geography of Pennsylvania 3 s.h.

A regional analysis of Pennsylvania, emphasizing man's cultural and economic response to environment factors. Special attention is given to the resources of the state, analyzing their extent, their use, the need for well directed conservation, and the regional planning program of the Commonwealth. Field trips are an integral part of the course. Prerequisite: Geog. 111.

Geog. 257: Geography of the United States and Canada 3 s.h.

A regional study of the United States and Canada, considering man's adjustment to the physical factors of relief, climate, soil, vegetation, and mineral resources. The political structure and their relations with each other and the rest of the world are analyzed from a geographic point of view. Particular emphasis is placed on Pennsylvania and its relationship in the regional geography of United States and Canada. Prerequisite: Geog. 111.

Geog. 351: Meteorology 3 s.h.

A systematic study of the atmosphere. The course analyzes the laws and underlying principles of atmospheric change. An opportunity is afforded the student to become familiar with the common weather instruments, to observe and record weather data, to read and interpret weather maps, and to consider the problems of aviation growing out of atmospheric conditions. Prerequisite: Geog. 111.

Geog. 352: Climatology 3 s.h.

A systematic study of the climatic regions of the world and the advantages and limitations of each for man's occupancy. The physical aspects of the atmosphere and the regional characteristics of climate are investigated. The course is valuable background material for Geog. 454, World Problems in Geography. Prerequisite: Geog. 111.

Geog. 353: Descriptive Astronomy 3 s.h.

The laboratory work of this course consists of identification of major constellations and of various types of heavenly objects. The

theory deals with methods of measurement of astronomical distances and with various theories of cosmic origin.

Geog. 354: Historical Geography of the United States 3 s.h.

A study of the natural and cultural regions of Pre-Columbian United States and the geography of the settlement and regional development of the country to 1890. Prerequisite: Geog. 111.

Geog. 355: Geography of the Soviet Union 3 s.h.

This regional study deals with Russia's location, size, surface features, climate, vegetation, soils, mineral wealth, occupations, production, transportation, and government. Russia's future production and economic and political influences are considered. Prerequisite: Geog. 111.

Geog. 356: Geography of Europe 3 s.h.

A regional course designed to develop unbiased understanding of the economic problems of Europe. Geographic relationships underlying land utilization, boundary disputes, and dominant international problems are considered. The Soviet Union is not included in this course. Prerequisite: Geog. 111.

Geog. 357: Geography of Asia 3 s.h.

A regional course designed to develop an understanding of the relationships of the economic, social, and political life of the people to their spatial environment. Problems of over population, standards of living, natural resources, industry, and government are emphasized. The Soviet Union is not included in this course. Prerequisite: Geog. 111.

Geog. 451: Cartography 3 s.h.

A study of the basic concepts in map design and techniques of map construction. Although special emphasis is given to actual map compilation and drawing, the course treats the evolution of maps, types of maps and their usefulness, map scales, use of aerial photographs as a source of map data, and the kinds and uses of drafting instruments. Two lectures and two hours laboratory weekly. Prerequisite: Geog. 111.

Geog. 452: Geography of Latin America 3 s.h.

A comparative study of the geographical regions of Middle and South America. Latin American relations with the United States and the rest of the world are interpreted through an analysis of the economic, social, and cultural activities of man in relation to the physical factors of his environment. Prerequisite: Geog. 111.

Geog. 453: Geography of Africa and Australia 3 s.h.

A regional study of Africa, Australia, and the neighboring islands of the Pacific, showing the social and economic development of these lands in relation to their physical environment. The political affiliation of these lands, the geographic aspects of the problems of colonies, land tenure, race, and the significance of strategic location and production are considered. Prerequisite: Geog. 111.

Geog. 454: World Problems in Geography 3 s.h.

A political geography. Attention is given to boundary problems, the value and control of colonies, fishing agreements, problems concerning commercial aviation, world trade, world food supplies, control and development of natural resources, and the geographic aspect of problems concerning world peace. Prerequisite: Geog. 111.

GERMAN

Ger. 151: German I (Elementary I) 3 s.h.

Essentials of grammar, inductively presented. Emphasis on aural comprehension and oral expression, with extensive use of the language laboratory. Students may not receive credit for this course until German 152 has been successfully completed. Exceptions may be made for seniors and transfers upon the recommendation of the Department Head.

Ger. 152: German II (Elementary II) 3 s.h.

Continuation of German 151, with increasing emphasis on graded reading material. Prerequisite: German 151, or permission of the instructor.

Ger. 153: Elementary German Conversation 3 s.h.

Conversational practice, with extensive oral drill of grammatical patterns. Designed for those students who have met the prerequisites for German 251 but are lacking in aural-oral proficiency. May be taken concurrently with German 251.

Ger. 251: German III (Intermediate I) 3 s.h.

Brief systematic review of basic grammar; graded readings, conversation and composition on everyday topics. Prerequisites: German 152; or two years of high school study and/or a satisfactory placement test score.

Ger. 252: German IV (Intermediate II) 3 s.h.

Intensive reading of selected short stories and/or other works; outside reading, with oral and/or written reports. Prerequisites: German 251; or three years of high school study and/or a satisfactory placement test score.

Ger. 253: Scientific German 3 s.h.

A study of scientific terminology and style, with extensive readings in various scientific fields. Prerequisite: German 251 or equivalent. Science and mathematics majors may substitute this course for German 252.

Ger. 255: German Civilization I 3 s.h.

A survey of German geography, history, literature and culture, designed to equip teachers with the materials and understanding necessary to the presentation of the language as a rich, meaningful and integral part of a great civilization. Prerequisites: German 252; or four years of high school study and/or a satisfactory placement test score.

Ger. 256: German Civilization II 3 s.h.

Continuation of German 255, which is prerequisite. These two courses are required of all majors.

Ger. 351: Advanced German Grammar and Composition 3 s.h.

Intensive oral and written drill, with emphasis on finer points of grammar, colloquial, and idiomatic usage. English-to-German translation, free composition, and conversation on everyday topics. Prerequisites: Same as for German 255.

HEALTH AND PHYSICAL EDUCATION

HPE 111: Health Education 2 s.h.

Consideration of the physical and mental equipment of the individual and of the practical application of health knowledge in personal and community living.

HPE 112: Physical Education I 1 s.h.

The development and practice of skills and attitudes in seasonal activities which may be carried on in college and after college. Achievement tests are given to determine the needs of the student.

HPE 121, 221, 321, 421: Physical Education 1 s.h.

Varied physical education activities for women, including archery, badminton, basketball, bowling, the dance, golf, skiing, swimming, tennis, and volleyball. Two hours per week.

HPE 211: Physical Education II 1 s.h.

A continuation of Physical Education I with greater emphasis and active participation in activities learned in Physical Education I.

HPE 212: Physical Education III 1 s.h.

Specialization in selected activities aimed to bring personal performance ability to advanced levels.

HPE 212 E: Physical Education**1 s.h.**

A course especially designed for Elementary majors with emphasis upon activities related to the elementary school. Required for all men and women majoring in Elementary Education. Two hours per week.

HISTORY**Hist. 112: History of Modern Civilization****3 s.h.**

A study of significant movements and events from 1500 to the present. The course emphasizes the interrelationships between cultures of various regions of the world, with major attention to the influence Western European development has exerted on other areas.

Hist. 151: History of Ancient and Medieval Civilization**3 s.h.**

The course includes a survey of prehistoric cultures, the earliest civilizations, and European Medieval civilization to 1648. Its purpose is to present a knowledge of the origins of the broad social, political, intellectual, and economic movements of the past, from which the student may gain an understanding of civilization today.

Hist. 212: History of United States and Pennsylvania—1865**to Present****3 s.h.**

A survey course in the history of the United States and Pennsylvania from 1865 to the present. Stress is placed on the impact of the Industrial Revolution on our society, the growth of the labor power, our part in World Wars I and II and the activities of our nation in behalf of international organization.

Hist. 251: History of United States and Pennsylvania to 1865**3 s.h.**

A survey course in the history of the United States and Pennsylvania from the beginning of the colonial period to the end of the Civil War. Emphasis is placed on the social, economic, and political development of our nation in general and of our Commonwealth in particular.

Hist. 252: History of Europe before 1815**3 s.h.**

A study of the development of the social, economic, political, religious, and cultural experiences of the European people, emphasizing the cause and effect of interrelation and inter-dependence of both people and events that are basic to understanding the fundamental forces that lead to modern life.

Hist. 253: History of Europe since 1815**3 s.h.**

A comprehensive study of the factors contributed by the European people in their national organization through their political, social and economic activities, together with consideration of the casual and intergroup relationships which are basic to analysis and interpretation of the difficulties facing the European world today.

Hist. 254: History of the Far East**3 s.h.**

A study of the development of the people of China, India, Japan, Indonesia, and the Pacific Islands. Attention is given to their cultures and development problems as they are related to each other and to the Occident.

Hist. 255: History of Latin America: Colonial Period**3 s.h.**

This course surveys the development of Colonial Latin America from its discovery to 1825. The economic, social, cultural, and political aspects of native Indian, Spanish, and Portuguese civilizations in the Old and New World are given detailed attention.

Hist. 255A: History of Latin America: National Period**3 s.h.**

The main emphasis in this course is on the history of the twenty Latin American countries since 1825. The economic, social, political, and cultural development receives detailed attention. The course also surveys Latin America's international relations with emphasis on U. S.-Latin American relations.

Hist. 256: History of Pennsylvania**3 s.h.**

A study of the founding and development of Pennsylvania from its colonial beginning to the present time. Emphasis is placed on the social, economic and political development in the different periods of its history. Special attention is given to the diversity of the people, their institutions and problems, and the growth of Pennsylvania to a leading position in our modern industrial world.

Hist. 257: History of the Near East**3 s.h.**

This survey is an area study of the early classical era by way of an advanced intensive exploration of the civilizations in the Mediterranean East and the Middle East. After an introduction to the religions of Judaism and Christianity in their political setting, the cultural contributions of the Semites, Greeks, and Romans are examined. The Islamic Age is stressed. Emphasis is placed upon modern identification of the countries that make this an explosive part of the world—Jordan, Israel, Lebanon, Iran, Iraq, Arabia, Syria, Egypt, Turkey. Their relationship to the great powers is given attention.

Hist. 354: Contemporary American History**3 s.h.**

A social and intellectual history of the United States in the period from 1865 to the present with emphasis on the twentieth century. Prerequisites: Hist. 251 and 212.

Hist. 355: Economic History of United States**3 s.h.**

A survey of the economic history of the United States and a study of the relationship of the economic and the political and social factors in the development of America. Prerequisites: Hist. 251 and 212.

Hist. 356: Contemporary European History**3 s.h.**

In this course the diplomatic background, the testing of the alliances, World War I, and the results of the Treaty of Versailles are emphasized. The various ideologies of government and economics are examined. Europe is placed in its proper setting of world significance.

Hist. 357: History of England to 1689**3 s.h.**

A comprehensive course in the History of the British Isles to the time of the Glorious Revolution. It is primarily for Juniors who are majoring in English or Social Studies.

Hist. 358: History of England since 1689**3 s.h.**

A comprehensive course in the cultural, political, and economic history of modern England.

Hist. 359: History of the American Frontier**3 s.h.**

This course includes the geographic continuity in the westward expansion of United States rather than the chronological. The historical period stressed in this course is from 1607 to 1893, the period when the American frontier was in the process of developing.

Hist. 360: Colonial America**3 s.h.**

This course begins with the European background of colonization in the American hemisphere and the establishing of the English colonies along the Atlantic seaboard. The economic, political, and social aspects are stressed. The course ends with the American Revolution.

Hist. 361: History of American Science and Technology**3 s.h.**

This course places emphasis on the historical survey of the development of American science and technology and of their effect on the growth of America's culture. America's contributions to the rest of the world, along the lines of science and technology, is stressed.

Hist. 362: Ancient History**3 s.h.**

This course is the story of the first phase of Western civilization. From its inception in the great river valleys of the Near East about 3000 B. C. through its adoption by the Greeks, Romans, and Western Europe to the fall of Rome, the origin of institutions and other man made developments are stressed.

Hist. 363: Medieval History**3 s.h.**

The content of this course begins with the accession of the European Diocletian in A. D. 284 and ends with the discovery of America. Stress is placed on the contributions to man in the tenth, eleventh, and twelfth centuries. The first part of the course covers the Late Roman Empire; the second part the story of the Byzantine Empire; and the third part the formation of the Christian Western Europe.

Hist. 364: Renaissance History**3 s.h.**

This course is a study of the Renaissance with particular emphasis on the important political, social, economic, and cultural forces that emerged during this period of transition and ushered in modern Western culture. Emphasis is placed on the evolution of modern states and the rise of individualism.

Hist. 365: History of Russia**3 s.h.**

This course is a concise presentation of Russian history from the beginnings of the Russian people up to and including the study of postwar Russia. The political, socio-economic, and intellectual development and periods of conflict are stressed in the light of present-day Russia.

Hist. 452: Diplomatic History of United States**3 s.h.**

A study of American diplomatic history from 1789 to the present. The course traces the development of major foreign policies and studies the national and international factors which influence and determine these policies. Prerequisites: Hist. 212 and 251.

Hist. 453: Twentieth Century World History**3 s.h.**

The significance of events in the present century is brought out in this course by a study of the growth of capitalism, imperialism, totalitarianism, international jealousies, World Wars I and II, and the attempt of the family of nations to find world peace through international understanding.

Hist. 454: The British Commonwealth of Nations**3 s.h.**

An advanced elective course on the formation and career of the British Commonwealth.

Hist. 455: The Culture of Europe (Educational Tour)**6 s.h.**

Recent history and government of selected countries of Europe will be stressed. Emphasis will be placed upon England, Holland, Germany, Switzerland, Italy, and France as the educational tour develops into the foreign study program. In alternate years the countries of the Balkans, Greece and Turkey, and the countries of Scandinavia, Finland, Sweden, Denmark, and Norway will be emphasized. English and German literature, the art and architecture of the Renaissance in Northern Italy, and the agricultural-industrial economy in France will receive intensive study. Geographical bases of cultural developments are noted. Recent developments in science, politics, and economics will receive attention. The main term paper will stem from a problem or project or discovery as observed by each student. This paper is due within 60 days upon the ending of the summer session class abroad.

Hist. 456: Society and Thought in America to 1865**3 s.h.**

The development of society and thought during the colonial and middle periods of American history. Emphasis is placed on the developing of many social institutions, various nationalities which settled in America and the contributions of each, and the cultural leaders between 1607 and 1865.

Hist. 457: Society and Thought in America—1865 to Present**3 s.h.**

The development of society and thought during the modern period of American history. Emphasis is placed on the value of the social economic, and cultural developments in the twentieth century. Comparisons with other major countries throughout the world are studied.

Hist. 458: English Constitutional History**3 s.h.**

A consideration of Constitutional government in England from the beginning of English history to the present. The study of governmental powers, political and judicial process, and the relationship of liberty and authority to the individual living under the government is included.

LIBRARY SCIENCE**L.S. 231: Administration of the Elementary School Library****3 s.h.**

An introduction to the principles and practices of elementary school librarianship. Standards, costs, acquisition, preparation and circulation of materials. Cooperation with school staff. (Elect in 3rd semester.)

L.S. 233: Book Selection for the Elementary School Library**3 s.h.**

A survey of the literature for the elementary school library with particular reference to the influence of changing social patterns upon the reading of the elementary school child. Wide reading in the field and the acquisition of techniques for the presentation of reading materials to the school child are expected of the student. (Elect in 4th semester.)

L.S. 251: Administration of School Libraries I**2 s.h.**

The place and purpose of the school library; its overall administration, organization, and objectives. Duties of the library staff. Relation of the library to the functioning of the whole school system.

L.S. 252: Administration of School Libraries II**3 s.h.**

The school library as an administrative unit of the school system. Planning of library quarters. Acquisition and preparation of materials. Management of students, publicity and public relations. The evaluation of the school library for accrediting.

L.S. 253: Book Selection I**3 s.h.**

The reading interests, habits, and skills of the child with particular emphasis on the junior high school pupil. Wide familiarity with suitable books and their evaluative criteria. Authors and illustrators of children's books. Preparation of annotations and the delivery of oral book reviews.

L.S. 254: Book Selection II**3 s.h.**

The reading interests, habits, and skills of the adolescent. Familiarity with suitable books for the high school with particular emphasis on books of today without neglecting the classics of young people's literature. The processes of book production, distribution, and evaluation in the nation as a whole. The oral book review.

L.S. 351: Cataloging and Classification I**2 s.h.**

The function of the card catalog in unlocking the resources of the school library. Cataloging of library materials by author, title, subject. Analytic entries. Cataloging non-book materials. Use and adaption of printed cards. Preparation of bibliographies. (Elementary—elect in 5th semester.)

L.S. 352: Cataloging and Classification II**2 s.h.**

The Dewey Decimal Classification and its adaptation to the needs of the school library. The preparation and arrangement of the library catalog. The use of the subject heading book and the procedures of subject cataloging. (Elementary—elect in 6th semester.)

L.S. 353: Reference Service I**2 s.h.**

Types of reference books including bibliographies, dictionaries, encyclopedias, yearbooks, directories, manuals, serials, and indexes are studied. Attention is given to experience in answering practical reference questions and to the selection of reference materials for high schools. (Elementary—elect in 5th semester.)

L.S. 354: Reference Service II**2 s.h.**

A continuation of Reference Service I. Government documents, audio-visual sources, and reference sources in special subjects including history, the social sciences, the sciences, the arts, literature, and religion. Experience in answering practical reference questions and in the selection of reference sources for high schools.

L.S. 355: Art for School Librarians**1 s.h.**

This course is designed to provide future librarians with basic skills and understandings of art and its relationship to good library procedures. It provides practical studio work in the elements of graphic expression, lettering, display and exhibition work, publicity techniques, layout, poster making, printing, book jacket design, bookbinding and related craft activities.

L.S. 451: Books and Libraries**2 s.h.**

The history of books and libraries. The development and spread of the printing press in Europe. The coming of the press to the new world. The spread of the press throughout the United States. The place of library in the society of today. Cooperation among existing library services, national, state, and local.

MATHEMATICS

Math. 111: Basic Mathematics**3 s.h.**

Development of the number system; nature and application of fundamental processes; extension of the number system to include common and decimal fractions and negative numbers; approximate nature of measurements; per cents; language of algebra including formulas, graphs, tables, and equations; meaning of proof; elementary concepts of statistics; art of indirect measurement; additional topics of interest to students. Not counted toward field of specialization.

Math. 151: College Algebra**3 s.h.**

Fundamental operations; factoring; fractions; exponents; functions and their graphs; linear, quadratic, and systems of equations; proportion and variation; progressions; mathematical inductions; logarithms; determinants; permutations and combinations. Prerequisite: 1 year high school algebra and 1 year high school geometry.

Math. 152: College Trigonometry**3 s.h.**

Functions of an angle; logarithms; use of tables; radians; identities; trigonometric and exponential equations; solution of triangles by natural functions and logarithms; inverse functions; complex numbers; application of all processes in practical problems.

Math. 161: College Algebra and Trigonometry**5 s.h.**

The course includes consideration of the structure of the complex number system; functions and the range and domain of functions; linear, quadratic, and systems of equations; and inverse functions. Mathematical induction and the binomial theorem will be treated as an adjunct to progressions and series, and permutations, combinations, and probability will be studied. Circular functions will be the basis for the development of trigonometry, which will then consider equations and identities involving trigonometric functions.

Math. 251: Analytic Geometry**3 s.h.**

Correlation of algebra and geometry in finding equations of loci and loci corresponding to certain equations; properties of the straight line, the circle and conic sections; rectangular and polar coordinates; transformation of coordinates; parametric equations; a brief introduction to three dimensions. Prerequisites: Math. 151 and 152 or 161.

Math. 252: Differential Calculus**3 s.h.**

Elementary concepts of limits and the derivative; applications of the derivative in problems of maxima and minima, rates, velocity, acceleration; possible introduction of integration as the inverse of differentiation. Prerequisite: Math. 251.

Math. 253: Advanced College Algebra**3 s.h.**

Theory of equations; determinants; partial fractions; series; complex numbers; further development of permutations, combinations and probability. Prerequisite: Math. 151.

Math. 254: College Geometry**3 s.h.**

Study designed to establish professional competence in geometry. Subject matter is chosen from plane and solid geometry topics, also from advanced geometry.

Math. 255: Surveying**3 s.h.**

Use of the transit, angle mirror, bypsometer, sextant, and other measuring instruments; simple map making exercises and elementary surveying; construction and use of student-made instruments and teaching devices. Prerequisites: Math. 152 or 161.

Math. 256: History of Mathematics**3 s.h.**

Study of the growth of mathematics through the centuries and the men who contributed to it; enrichment of the mathematical background of the students; integration of basic areas of mathematics.

Math. 257: Mathematical Theory of Finance**3 s.h.**

Introduction to elementary theory of simple and compound interest with solution of problems in annuities, sinking funds, amortization, installment buying, mathematics of life insurance. Prerequisites: Math. 151 or 161.

Math. 261: Advanced Analytic Geometry**3 s.h.**

Parametric equations and geometric properties and construction of conics. Various coordinate systems, frames of reference, oblique axes and transformations from rectangular to oblique axes. Linear transforms. Cross ratio and invariance of transformation. Space geometry.

Math. 351: Integral Calculus**3 s.h.**

Integration as the inverse of differentiation; formulas of integration; the definite integral; methods of integration; integration as the limit of a sum applied to areas, volumes, lengths of curves and other practical problems. Prerequisite: Math. 252.

Math. 352: Statistics**3 s.h.**

Basic principles and methods of statistics common to scientific research; understanding of and ability to use graphs, frequency distributions, measures of central tendency and dispersion; normal curve; correlation; regression and prediction; reliability of statistical measures; curve-fitting; development of formulas.

Math. 353: Synthetic Geometry**3 s.h.**

Extension of competency in geometry; modern problems of the triangle and the circle; further development of rigorous proof; construction based on loci and indirect elements; non-Euclidean geometry. Prerequisite: High School Plane Geometry.

Math. 354: Theory of Equations**3 s.h.**

Complex numbers; the remainder theorem; algebraic equations and their roots; limits of roots; Rolle's theorem; Descartes's rule of signs; rational roots; Newton's method for integral roots; cubic and quartic equations; the theorems of Sturm and Budan; numerical approximation to the roots.

Math. 356: Modern Algebra**3 s.h.**

Number theory and moduli. Integral domains, equivalence and congruence. Boolean Algebra. Groups, properties, sets, and cosets.

Fields, rings, and ideals. Matrix Theory. Mathematical structures of logic.

Math. 357: Modern Geometry 3 s.h.

The postulational and axiomatic approach. Euclidean geometry. Non-Euclidean Geometry, Lemoine and Brocard geometry. Principles of Duality. Curvilinear coordinates on a surface. Envelopes. Systems of curves and topology of surfaces.

Math. 358: Computer Principles 3 s.h.

This is a course related to the total organization of the IBM 1620 computer. An important part of the course is laboratory instruction on the keypunch and computer. Also included are arithmetic instructions, internal data transmission, branch instructions, input-output devices, floating point arithmetic, macro instructions, 1620 FORTRAN, direct divide, indirect addressing, floating point hardware, the 1620 console, and console operating procedures.

Math. 450: Introduction to Symbolic Logic 3 s.h.

A one semester course designed to include such topics as the nature of mathematical logic and the propositional calculus. Valid and invalid argument forms are developed with symbolic proofs. The development of truth tables and their relationship to argument forms is displayed. Quantification and its consequences are demonstrated. Sets, Venn diagrams and their application to arguments and proofs are a part of the development of the course.

Math. 451: Advanced Calculus 3 s.h.

A continuation of the calculus to include series; additional work in partial differentiation; multiple integrals; and elementary differential equations. Prerequisite: Math. 351.

Math. 452: Ordinary Differential Equations 3 s.h.

Order and degree of ordinary and partial equations. The formation of differential equations. Equations of the first order and methods of solution. Linear equations with constant coefficients. Special higher order equations. Simultaneous equations. Series solution.

Math. 453: Partial Differential Equations 3 s.h.

An introductory course to partial differential equations and boundary value problems with the customary applications in mathematical physics. A development of the transform calculus with emphasis on the La Place transform and its use in the solution of both ordinary and partial differential equations is presented. Series solutions are presented and Ergin values and Fourier series studied.

Math. 454: Theory of Numbers 3 s.h.

This course considers the integers as an integral domain and develops the axiom of mathematical induction, the fundamental theorem of arithmetic. Consideration is given to number-theoretic functions, Diophantine Equations and Pythagorean triplets. An introduction is made to congruences, linear congruences and congruences of higher degree. A study is made of quadratic residues, and the Quadratic Reciprocity Law. Also considered are Peanos' Axioms for the natural integers and continued fractions.

Math. 455: Boolean Algebra 3 s.h.

Introduction to the algebra of sets; Boolean Algebra as a postulational, deductive, mathematical structure; applications of Boolean Algebra to electrical networks, switching circuits, decision theory, and the propositional calculus.

MUSIC

Mus. 111: Introduction to Music 3 s.h.

This course provides an orientation in music experience which aims to equip the student with a knowledge and understanding of music as it relates to the art of daily living. Through the use of

recordings, radio, concerts, and other media, every possible contact is made with music. This course is required of all students. No prerequisite courses or special abilities are required.

Mus. 151: Literature and Materials of Music I 3 s.h.

The basic vocabulary of music fundamentals needed for the effective study of music: notation, scale structures, intervals, triads and seventh chords, rhythm and meter, phrase and cadence, overtone series, modulation, introductory study of two- and three-part forms, etc. The fundamental elements will be presented in the light of their actual occurrence in musical works of the past and the present. No prerequisite. Course number for Elementary Majors: Music 131.

Mus. 152: Literature and Materials of Music II 3 s.h.

An introduction to the study of significant works of music of various historical periods and styles. Examples chosen for study will present a gradual progression from the more simple to the more complex in terms of musical texture, formal structure and instrumentation. Includes drills in sight-singing and melodic and harmonic dictation, harmonic and contrapuntal part-writing and creative assignments in the writing of melodies, cadences, harmonic phrases, and short compositions to demonstrate familiarity with the style of composers of various periods. Prerequisite: Literature and Materials I. Course number for Elementary Majors: Music 232.

Mus. 161: Piano 1 s.h.

Individual instruction in piano.

Mus. 162: Voice 1 s.h.

Individual instruction in voice.

Mus. 163: Violin, viola 1 s.h.

Individual instruction in strings.

Mus. 164: Cello, String Bass 1 s.h.

Individual instruction in strings.

Mus. 233: Song Literature for Childhood Education 3 s.h.

This course deals with the materials used in music education for the elementary school, including rote songs, reading songs, tonal and aural development, rhythm activities, and listening lessons. Emphasis is given to the development of singing and performing command of representative song literature.

Mus. 232: Piano Keyboard 3 s.h.

This course provides skills needed in playing the piano. Various styles of accompaniment for songs, rote playing and sight reading are studied. Emphasis is placed upon the development of technical skills, reading facility and memorization.

Mus. 251: Literature and Materials III 3 s.h.

A continuation of the objectives and procedures of the previous course but including the study of musical works of greater complexity of formal structure, harmonic and contrapuntal texture. In addition stylistic comparisons will be made of works of a certain type written by composers of various periods. Prerequisite: Literature and Materials I and II.

Mus. 252: Literature and Materials IV 3 s.h.

A summary and synthesis of music literature considered chronologically from the standpoint of the historical evolution of musical style. In addition, at least one composer will be selected from each historical period for particular study concerning the range and scope of his total output in relation to the stylistic changes or growth which occur within his own personal language. Prerequisite: Literature and Materials I, II, and III.

Mus. 253: Harmony I 3 s.h.

A consideration of theory including the study of the tonic, subdominant, and dominant harmonies leading to simple altered chords and modulation in written form.

Mus. 254: Harmony II 3 s.h.

A continuation of Harmony I including the study of by-tones, the submediant, supertonic, and mediant harmonies. In addition, creative practices of established composers of the various periods are analyzed.

Mus. 255: Ear Training and Sight Singing 3 s.h.

This course offers materials for the training of the singer and the listener to grasp, understand, and write what is heard from a melody from two and four part harmony. The emphasis is on singing from a score and an aural analysis of melody and harmony.

Mus. 256: Elements of Conducting 3 s.h.

An insight into the responsibilities of the conductor including leadership qualities, musical understandings, and baton techniques. A variety of performance practices are analyzed in order that positive and proper interpretative procedures may be realized.

Mus. 257: History of Music I 3 s.h.

A study of basic music literature from the Greeks to the present day with emphasis upon active listening and development of a musical vocabulary.

Mus. 258: History of Music II 3 s.h.

A study of music literature from the Renaissance period to the present day with emphasis upon active listening and development of a musical vocabulary.

**Mus. 261: Fundamental Techniques of Band and
Orchestral Instruments I** 3 s.h.

This course covers briefly the construction, tonal qualities, range, and special uses of each instrument, in solo capacity and as part of the orchestra and band. Consideration is given to practical work and learning to play and to demonstrate with special emphasis on techniques.

**Mus. 262: Fundamental Techniques of Band and
Orchestral Instruments II** 3 s.h.

This course continues the study of techniques and uses as related to instrumental ensemble and solo playing. Special emphasis is applied to the mechanics of each instrument, fingering passages, and in total the course is designed to aid instrumental students in organizations, securing and maintaining tonal balance, preparation for arranging, and clinical examination of new materials.

Mus. 351: Literature and Materials of Music V 3 s.h.

A survey of the literature of music within the area of the student's particular field of interest (i.e. vocal, keyboard, instrumental) designed to develop a knowledge of the music available to the student as a performer and an understanding of appropriate and authentic style in performance. Prerequisite: Literature and Materials I through IV.

Mus. 358: Trends in American Music 3 s.h.

This course will utilize extensive reading and discussions that cover significant materials in the development of music from pre-revolutionary America to the present day.

Mus. 361: Piano Teaching Methods and Materials 3 s.h.

A comprehensive survey of modern piano teaching methods and available materials for beginning, intermediate, and advanced studies with emphasis on the teaching of notation and the development of reading skills, the teaching of the keyboard techniques through understanding of the player's physical mechanism and the coordination of timing and touch; problems of fingering, pedaling and memorization. Evaluation of material for beginning students; easier teaching pieces by legitimate composers; anthologies; appropriate music for the intermediate student leading to a more advanced technique

and musicianship and to acquaintance with a wide range of composers and musical styles. Prerequisite: Literature & Materials I & II. Permission of Instructor.

Mus. 365: Orchestration 3 s.h.

Advanced study in band and orchestra scoring with special emphasis on the mechanics of arranging. Individual scores and parts will be conducted and played by the college band and orchestra. Prerequisites: Harmony I and II; Techniques of Band and Orchestra Instruments.

Mus. 367: Choral Conducting 3 s.h.

An intensive survey of choral literature with organization for reading, conducting, and interpretation of choral music of all periods, styles, and vocal arrangements, together with emphasis upon the psychology of choral ensembles. Prerequisite: Elements of Conducting (Mus. 256).

Mus. 368: Choral Techniques 3 s.h.

An intensive approach to the development of techniques and abilities necessary for working with or participating in choral ensembles. Vocal techniques, tone production, proper breath control and a sound knowledge of choral literature are offered.

PHILOSOPHY

Phil. 111: Elementary Logic 3 s.h.

Principles of correct reasoning; principles of deductive and inductive inference and scientific method; use and misuse of language in reasoning.

Phil. 211: Introduction to Philosophy 3 s.h.

Inquiry into the persistent problems of philosophy, primarily those concerning man, nature and God. Prerequisite: sophomore standing.

Phil. 212: Ethics 3 s.h.

Examination of the problems of value and moral standards with a view toward developing an appreciation of the nature of the moral life. Prerequisite: sophomore standing.

Phil. 255: History of Philosophy I 3 s.h.

Thinkers from the Ancient Greeks up to the Renaissance, with special attention to Plato, Aristotle, Augustine, and Aquinas. Prerequisite: sophomore standing.

Phil. 256: History of Philosophy II 3 s.h.

Thinkers from the Renaissance to the 19th Century, with special attention to Descartes, Spinoza, Hume, Kant, and Hegel. Prerequisite: Philosophy 211 or 255.

Phil. 350: Philosophy of Religion 3 s.h.

Inquiry into the nature and validity of religious knowledge; the nature and existence of God; the nature of man and human destiny. Prerequisite: 3 credit hours in philosophy.

Phil. 351: Social and Political Philosophy 3 s.h.

Study of social and political philosophers with special attention to their significance for the present; the individual in relation to the state and society. Prerequisite: 3 credit hours in Philosophy.

Phil. 352: Theory of Knowledge 3 s.h.

Concepts and problems involved in the appraisal of certain types of human knowledge: perception, knowledge and belief, and truth. Prerequisite: 6 credit hours in Philosophy.

Phil. 353: Metaphysics 3 s.h.

Inquiry into some of the fundamental philosophical concepts: being, substance, matter, mind, and God. Prerequisite: 6 credit hours in Philosophy.

Phil. 354: Philosophy of Art (Aesthetics) 3 s.h.

Study of some of the aesthetic theories from Plato to the present; nature of the aesthetic experience; principles of criticism in literature and the arts. Prerequisite: 3 credit hours in Philosophy.

Phil. 355: Philosophy of Science 3 s.h.

Methods and procedures of reliable knowledge in the formal, natural, and social sciences. Prerequisite: 3 credit hours in philosophy.

Phil. 356: Oriental Philosophy 3 s.h.

Significant contributions to philosophical and religious thought in the Near East, India, China, and Japan. Prerequisite: 3 credit hours in philosophy.

Phil. 450: Contemporary Philosophy 3 s.h.

Movements since the latter half of the 19th century: Naturalism, Dialectical Materialism, Positivism, and Existentialism. Prerequisite: Phil. 256.

PHYSICS

Ph. 251: General Physics I 4 s.h.

This is an introductory course in mechanics, heat, and sound. Some of the topics studied are the mechanics of solids, liquids, gases, thermometry, calorimetry, heat transference, and the production and nature of sound waves including musical sound.

Ph. 252: General Physics II 4 s.h.

This is a continuation of Physics I and an introductory course in magnetism and electricity. Some of the topics discussed are reflection and refraction, optical instruments, spectra, and interference. The portions devoted to electricity and magnetism deal with the general concepts of magnetism, electrostatic, electrical circuits, generators, motors, and alternating currents.

Ph. 253: Physical Measurements 3 s.h.

Measurements play a vital part in industry, engineering and physical science. In this course a study is made of several instruments used in accurate measurement. Principles of operation and practical uses are emphasized. Some of the important instruments used in the areas of mechanics, heat, light, sound, astronomy, electricity, and atomic physics are studied. Field trips will be made to study industrial uses of instruments of measurement.

Ph. 254: History of Physics 3 s.h.

Many of the important discoveries which have helped to create modern physics are given primary consideration.

Ph. 256: Sound 3 s.h.

This is an intermediate course in the study of sound. The physical basis of sound is studied under such topics as wave motion, characteristics of sound waves, reproduction and measurement of sound, the ear and hearing, and architectural acoustics and sound insulation. Prerequisites: Ph. 251 and 252.

Ph. 257: Laboratory Techniques in Physics 3 s.h.

This course includes laboratory planning; selecting, care, and storage of equipment; selection of individual experiments; and administration of individual laboratory work.

Ph. 351: Mechanics 4 s.h.

This is an intermediate course in mechanics of solids, liquids, and gases. An opportunity is provided for a deeper insight into the principles in operation and their practical application. Studies are made of rectilinear and circular motion, work and energy, impulse and momentum, simple harmonic motion, and hydrostatics. Emphasis is placed on quantitative considerations. Prerequisites: Ph. 251 and 252, and Math. 351.

Ph. 352: Electricity and Magnetism 4 s.h.

This is an advanced course in general electricity and magnetism. The electric magnetic fields, D.C. and A.C. circuits, capacitance, inductance, electromotive force, and electrical instruments are among the topics developed. Prerequisites: Ph. 251 and 252.

Ph. 353: Atomic Physics 4 s.h.

The structure of atoms, ions, and molecules as determined from spectral analysis is the major consideration of this course. Attention is given also to nuclear structure and nuclear reactions. Prerequisite: Math. 351.

Ph. 354: Optics 3 s.h.

This is an intermediate course in optics. Geometrical and physical optics are included. Reflection and refraction at surfaces, lenses, interference and diffraction, elementary spectroscopy, and polarization of light are discussed. Applications are made in the study of optical instruments. Prerequisites: Ph. 251 and 252.

Ph. 355: Electronics 3 s.h.

This is a course dealing with the electron, including the charge, emission, and velocity of the electron. The fundamentals of vacuum tubes and their circuits and the use of tubes in communications and industry are studied. Prerequisites: Ph. 251 and 252.

Ph. 356: Heat 4 s.h.

This is an intermediate course in heat. The basic concepts and principles are developed more intensively in the study of properties of gases and in thermodynamics. Some of the specific topics studied are temperature measurements, expansivity, specific heat, thermal conductivity of solids and liquids, thermal properties of gases, change of phase and heat engines. Prerequisites: Ph. 251 and 252, and Math. 351.

Ph. 357: Demonstrations in Physics 3 s.h.

This course is designed to stress the demonstrations associated with the teaching of each of the areas of high school physics and general science. Attention is given to recent changes in curricula of high school physics courses.

Ph. 358: Electrical Measurements 3 s.h.

Discussion and practice in the measurement of resistance, current, potential, inductance, capacitance, and impedance. Two lectures and one three-period lab. Prerequisite: Math: 351.

Ph. 360: Major Concepts 3 s.h.

Study of five basic concepts: classical mechanics, relativity, electricity, quantum mechanics, and statistical mechanics. 3 lectures each week.

POLITICAL SCIENCE**P.S. 211: American Government** 3 s.h.

The study of the general principles of the American system of constitutional government; special emphasis is placed upon the organization and functions of the national government—legislative, executive, and judicial. The rights and duties of citizenship, the electorate, political parties, civil rights, and the growing regulatory functions of government are carefully treated.

P.S. 351: State and Local Government 3 s.h.

This course deals mainly with a detailed study of how our state and local governments function. Emphasis is placed on Pennsylvania government and the study is implemented by a field trip to Harrisburg for a more complete observation of state government at work. Field trips are made to local borough council and neighboring council meetings when available. A detailed study of the Constitution of Pennsylvania is made with emphasis on current amendments and changes. Independent study through outside projects is one of the requirements of this course.

P.S. 352: International Relations 3 s.h.

This course emphasizes the modern economic, social, political, religious, and cultural problems that reflect their influence in the relationships of the great nations of the world. Special attention is paid to the struggle of the peoples of the world to resolve their differences through international cooperation.

P.S. 353: United Nations: Organization and Function 3 s.h.

This course is designed to afford the student an understanding of the forms and functions of the United Nations as it evolved from the League of Nations. Special reference is given to the work of the United Nations in relation to health and cultural welfare along with the more fundamental problems such as peace or war.

P.S. 354: Constitutional Law of the United States 3 s.h.

A study of the development of the Constitution through the interpretations of the Supreme Court. This includes a study of the separation of governmental powers, political and judicial processes, federalism as a legal device, and the relationship of liberty and authority to the individual living under government. Prerequisite: P.S. 211.

P.S. 355: Political Parties and Elections 3 s.h.

A survey course with emphasis on the study of the electorate, pressure groups, and public opinion, nature and history of political parties, party organization, methods of nominations, and elections. Special attention is given to the place of political parties and elections as instruments of democracy and their place in the framework of Pennsylvania's government.

P.S. 451: Comparative Government 3 s.h.

In this course major attention is given to Great Britain and Soviet Russia as best representing, among foreign governments, the democratic and authoritarian system. Brief consideration is given to the governments of France, Italy, Germany, and Japan. Frequent comparisons and contrasts are drawn between these governments and government in the United States. Prerequisite: P.S. 211.

PSYCHOLOGY**Psy. 211: General Psychology 3 s.h.**

A comprehensive study of the origins, motives, and modifications of human behavior with emphasis on the scientific study of human conduct; the importance of man's biological inheritance and the significance of the socio-economic environment in influencing human living. Attention is given to the simpler techniques in psychological experimentation.

Psy. 222: Educational Psychology 3 s.h.

The nature of the learning process and the application of the principles of psychology to the problems of learning and teaching with special emphasis on the correlated problems of maturation, individual differences, and psychological adjustment. A minimum of interpretive statistical and evaluative skills is included.

Psy. 320: Human Growth and Development 5 s.h.

Acquisition of understanding and appreciation of the mental, physical, social, and emotional aspects of development. Emphasis on techniques of motivation, principles of learning, the role of individual differences, the improvement of study habits, and environmental factors affecting attitudes, personalities, growth, and intellectual interests. Directed observation of children at various grade levels, lectures, discussions, readings, and reports.

Psy. 321: Psychology of Adolescence 2 s.h.

An understanding of the self concept during the adolescent period of human development and an appreciation of the basic problems inherent to the stresses of changing status through physical, social, and sexual maturation. Prerequisite: Psy. 211.

- Psy. 323: Mental Hygiene** 3 s.h.
Problems of personality and mechanisms of adjustment, including study of the origin and resolution of conflicts and the role of emotion in the pattern of behavior are studied. Prerequisite: Psy. 211.
- Psy. 331: Child Psychology** 3 s.h.
Understanding of the child as an individual in all phases of maturation. A basic empathy of the psychological, physical, and social needs of children is implemented through utilization of the facilities for observation provided in the training school. Prerequisite: Psy. 211.
- Psy. 332: Psychology of Exceptional Children** 3 s.h.
The nature and characteristics of the blind, the deaf, the crippled, speech defective, mentally handicapped, gifted, and socially maladjusted. Objectives are to promote a functional understanding of the psychological manifestations of their behavior, the treatment of same, and the guiding principles involved in their learning. Prerequisite: Psy. 211.
- Psy. 333: Child Adjustment** 3 s.h.
The study of the child, his emotional needs, the relation of personal and environmental factors in his adjustment, mode of adjustment, and the role of the teacher and special agencies in facilitating his adjustment. Use of case histories, directed observations, and project work in developing techniques useful to the teacher in improving his skill in working with children.
- Psy. 334: Abnormal Psychology** 3 s.h.
Study of symptoms, causes, prevention, and social significance of mental abnormalities, disorders, and personality disturbances; significance of aberrations as found in psychoneuroses, psychoses, character disorders, alcoholism, drug addiction, and feeble mindedness.
- Psy. 335: Social Psychology** 3 s.h.
A study of group behavior of man in relation to cultural and individual variables such as public opinion, communication, prejudice, motivation and personality development.

RUSSIAN

- Russ. 151: Russian I (Elementary I)** 3 s.h.
Essentials of grammar, inductively presented. Emphasis on aural comprehension and oral expression, with extensive use of the language laboratory. Students may not receive credit for this course until Russian 152 has been successfully completed. Exceptions may be made for seniors and transfers upon the recommendation of the Department Head.
- Russ. 152: Russian II (Elementary II)** 3 s.h.
Continuation of Russian 151, with increasing emphasis on graded reading material. Prerequisite: Russian 151, or permission of the instructor.
- Russ. 251: Russian III (Intermediate I)** 3 s.h.
Brief systematic review of basic grammar; graded readings, conversation and composition on everyday topics. Prerequisites: Russian 152; or two years of high school study and/or a satisfactory placement test score.
- Russ. 252: Russian IV (Intermediate II)** 3 s.h.
Intensive reading of selected short stories and/or other works; outside reading, with oral and/or written reports. Prerequisites: Russian 251; or three years of high school study and/or a satisfactory placement test score.

SAFETY EDUCATION

SE 211: General Safety Education 3 s.h.

The development of habits and attitudes that will make for safe living by both teachers and students. Acquaintance with 1. Rules, regulations, and laws concerning the operation of motor vehicles; 2. Rules and regulations of pedestrian travel; 3. Other hazards to which we are commonly subjected, such as fire, electricity, etc., especially in the home and school.

SE 212: Organization and Administration of Safety Education 3 s.h.

A consideration of procedures and problems related to the organization and administration of a safety education in the public school.

SE 213: Methods and Materials for Teaching Safety in the Secondary Schools 3 s.h.

The study of evaluative techniques, content, methods, and teaching aids in the program of safety education in the secondary schools.

SE 214: Psychology of Accident Prevention 3 s.h.

Relates the achievement of behavior consistent with safe living to the psychological factors and techniques essential in the learning process. A review of the literature and experimentation relative to proneness to accidents, effect of alcohol on drivers, reaction times, etc.

SE 215: Visual and Other Aids in Safety Education 3 s.h.

Evaluation and use of posters, charts, radio, projectors, and special aids in the teaching of safety education.

SE 351: Driver Education and Traffic Safety 3 s.h.

Classroom instruction combined with road training and the teaching of driving to beginners using dual control cars. Emphasis is placed upon the essential facts, principles, skills, and attitudes necessary for good driving and the teaching of same to beginning drivers. Ability to use and interpret the results of psycho-physical testing is required.

SCIENCE

Ph. Sci. 111: Basic Physical Science I 3 s.h.

This course utilizes the fields of astronomy, physics, and chemistry to provide a background of science. A study of astronomy, sound, the structure of atoms as related to chemical bonding and the language of chemistry are included in the first semester.

Ph. Sci. 112: Basic Physical Science II 3 s.h.

This course is a continuation of Basic Physical Science I but places emphasis upon heat, electricity, magnetism, simple machines, and the chemistry of life processes and industry.

Sci. 222: Teaching of Elementary Science 2 s.h.

Methods of presenting science in each grade of the elementary school with the important facts and principles that should be taught in each grade are emphasized. Stressed are field work, collection of materials, special techniques, and demonstrations to adapt elementary science to local conditions. Evaluations of elementary science texts and pamphlets that are now available for each grade.

Sci. 231: Fused Science 2 s.h.

This course, following the year of basic sciences, is designed to provide the prospective teacher with a more adequate background in science. To achieve this purpose units or problems are selected which cut across the various fields of science. Some of the units covered are: Earth and Space Science, Nature Study, and Conservation. Emphasis is placed upon developing resourcefulness in gathering data and using the scientific method in the solution of problems.

SOCIOLOGY-ANTHROPOLOGY

Soc. 211: Principles of Sociology

3 s.h.

This is a basic course in sociology dealing with the interaction arising from the association of human beings. Emphasis is placed upon natural and social heritage; the meaning and functions of culture; and the origin, function, and characteristics of social institutions such as the family, religion, and the state, with inquiry into the nature and genesis of pathology.

Soc. 351: Contemporary Social Problems

3 s.h.

This course deals with problems which seem to interfere with the proper functioning of our society as a whole. Such problems as divorce, alcoholism, the industrial worker, the mentally deficient, the small town, crime and the community, and many others are attacked and discussed. Individual research by means of projects is assigned and requires extensive reading in the field. Visits are made whenever possible to places where social problems are prevalent. The student should have had Soc. 211 as a background for this course.

Soc. 352: Home and Family Living

3 s.h.

This course deals with the development of the family and the home in its historical, economic, and legal aspects. The various factors influencing the organization, disorganization, and reorganization of the family are considered, as well as the modern trends in this basic institution.

Soc. 353: Anthropology

3 s.h.

This course deals with the origin, diversification, and evolution of man's way of life (cultures) from extinct primitive systems to modern industrial civilizations. This course is an introduction to Anthropology (the study of man) with emphasis on the nature and concept of culture. Some work is done in Physical Anthropology. Emphasis is placed on the simple and complex cultures of the world with specific readings in each category.

Soc. 354: Cultural History of Africa and Asia

3 s.h.

This course begins with the rise and development of Islam and includes the expansion of Arab cultures into the Middle East and North Africa, the Muslim contribution to western civilization, Arab age of discovery in the Indian Ocean, the Ottoman Empire in Asia, and Arab nationalism. The second section deals with pre-history Africa as revealed by modern archaeology, a synopsis of African tribal cultures, the role of white explorers, and the imprint of colonialism on the modern African scene.

Soc. 355: Aboriginal North America

3 s.h.

This course begins with the study of the earliest archaeological evidence for the presence of Homo sapiens in the New World, the gradual development of Native Amerind cultures during the Palaeo-Amerind period, and the subsequent Archaic level as it shows the native population in balance with the environmental resources. While the initial emphasis will be upon the rise and development of indigenous cultural patterns, considerable time will be devoted to a close scrutiny as to how man utilized his environment.

Soc. 356: Field Archaeology

This course will give undergraduate students an opportunity to participate actively in all phases of archaeology field investigation of a limited section of the Allegheny river drainage in order to determine cultural sequence, settlement patterns, population density, economy, cultural influences, technologies, and human ecology. Procedures will include reconnaissance, testing of suspected sites, site survey, controlled excavation, site mapping, interpretation and recovery of specimens, and a final site report.

SPANISH

Span. 151: Spanish I (Elementary I) 3 s.h.

Essentials of grammar, inductively presented. Emphasis on aural comprehension and oral expression, with extensive use of the language laboratory. Students may not receive credit for this course until Spanish 152 has been successfully completed. Exceptions may be made for seniors and transfers upon the recommendation of the Department Head.

Span. 152: Spanish II (Elementary II) 3 s.h.

Continuation of Spanish 151, with increasing emphasis on graded reading material. Prerequisites: Spanish 151, or permission of the instructor.

Span. 153: Elementary Spanish Conversation 3 s.h.

Conversational practice, with extensive oral drill of grammatical patterns. Designed for those students who have met the prerequisites for Spanish 251 but are lacking in aural-oral proficiency. May be taken concurrently with Spanish 251.

Span. 251: Spanish III (Intermediate I) 3 s.h.

Brief systematic review of basic grammar; graded readings, conversation and composition on everyday topics. Prerequisites: Spanish 152; or two years of high school study and/or a satisfactory placement test score.

Span. 252: Spanish IV (Intermediate II) 3 s.h.

Intensive reading of selected short stories and/or other works; outside reading, with oral and/or written reports. Prerequisites: Spanish 251; or three years of high school study and/or a satisfactory placement test score.

Span. 253: Commercial Spanish 3 s.h.

A study of commercial terminology and style, with extensive practice in the writing of business letters of various kinds. Prerequisite: Spanish 251 or equivalent. Business administration majors may substitute this course for Spanish 252.

Span. 255: Hispanic Civilization I 3 s.h.

A survey of Hispanic geography, history, literature, and culture designed to equip teachers with the materials and understanding necessary to the presentation of the language as a rich, meaningful and integral part of a great civilization. Prerequisites: Spanish 252; or four years of high school study and/or a satisfactory placement test score.

Span. 256: Hispanic Civilization II 3 s.h.

Continuation of Spanish 255, which is prerequisite. These two courses are required of all majors.

Span. 351: Advanced Spanish Grammar and Composition 3 s.h.

Intensive oral and written drill, with emphasis on finer points of grammar, colloquial and idiomatic usage. English-to-Spanish translation, free composition, and conversation on everyday topics. Prerequisites: Same as for Spanish 255.

Span. 353: The Modern Spanish Drama 3 s.h.

Spanish plays of the 19th and 20th centuries, with special emphasis on the works of Zorrilla, Pérez Galdós, Benavente, Casona and García Lorca.

Span. 354: The Modern Spanish Novel 3 s.h.

The Spanish novel of the 19th and 20th centuries, with special emphasis on the works of Pérez Galdós, Blasco Ibáñez, Baroja, Sender and Cela.

Span. 359: The Literature of the Golden Age 3 s.h.

A survey of the greatest period of Spanish literature, with selected readings from Cervantes' *Don Quijote* and the plays of Lope de Vega, Tirso de Molina, Calderón and Ruiz de Alarcón.

Span. 361: The History of Mexican Literature**3 s.h.**

The history of Spanish literature in Mexico from the Conquest to the present, with special emphasis on Lizardi, Altamirano, the novelists of the Revolution, and selected contemporary writers.

SPECIAL EDUCATION**Spec. Ed. 220: Nature of Mental Retardation****3 s.h.**

A comprehensive study of the biological, psychosocial, and educational implications of retarded mental development, to include a consideration of etiology; assessment and diagnosis; educational programs, including pre-school and post-school; adult social and vocational adjustment; national and local programs; and research. Prerequisite: Psy. 332.

Spec. Ed. 321: Curriculum Development for Exceptional Children (Mentally Retarded)**3 s.h.**

Study of the educational objectives for children with retarded mental development and the nature of curricula designed to satisfy these objectives; application of the fundamentals of curriculum construction; analysis and evaluation of representative curricula at elementary and secondary levels by study and observation; survey of materials and equipment to implement the curriculum. Prerequisite: Spec. Ed. 220.

Spec. Ed. 422: Methods of Teaching Exceptional Children (Mentally Retarded)**3 s.h.**

A survey and analysis of research findings related to special methodology in teaching the basic skills; a consideration of educational and psychological evaluation in grouping children for instructional purposes; maintaining and utilizing pupil records; a review of special procedures related to vocational orientation in secondary school programs; observation of clinical evaluations of children with retarded mental development, including case study and parent-counseling. Prerequisite: Spec. Ed. 220.

Spec. Ed. 423: Curriculum Materials for Exceptional Children (Mentally Retarded)**3 s.h.**

Designed to aid students in the development of curriculum and methods suited to their particular problems with the mentally retarded. Attention given to organization and curriculum at elementary and secondary levels; methods and materials adapted to age groupings; pupil guidance and evaluation.

Spec. Ed. 424: Laboratory Methods with Exceptional Children (Mentally Retarded)**3 s.h.**

Survey of methodology and instructional techniques in vocabulary development; reading techniques; language and speech development; auditory training; method of diagnosis and differentiation; and teaching techniques employed for their rehabilitation. Work on project of particular concern to individual student.

Spec. Ed. 429: Student Teaching (Mentally Retarded)**6 s.h.**

Observation and participation in teaching children with retarded mental development and in activities related to the performance of a teacher's work.

SPEECH**Sp. 010: Remedial Speech****0 s.h.**

Speech Clinic — diagnostic and remedial program for the speech handicapped.

This service is made available to the students regularly enrolled at the college. College students who need help are encouraged to seek

the help of the clinic. Every effort is made to help students remove deficiencies which would interfere with their successful progress in college. Students referred to the Director of the Speech Clinic must officially enroll through the office of the registrar for this non-credit course.

Sp. 113: Fundamentals of Speech 3 s.h.

Study and application of the fundamental principles of effective speaking; training in selection, organization, and development of materials suitable for speeches; analysis of voice; personality adjustment as related to speaking-listening situations; patterns for analysis of an audience: prior analysis, cybernetic analysis, and post analysis;; techniques of group dynamics and role playing.

Sp. 114: Advanced Public Speaking 2 s.h.

Inquiry into and practice in the principles of effective public speaking. Detailed analysis of the areas of invention, arrangement, style, and delivery, and an introduction to speech criticism as a tool to improve the speaker's own abilities. Prerequisite: Speech 113.

Sp. 115: Parliamentary Procedure 1 s.h.

A study of the principles and applications of the standard parliamentary rules used in conducting formal meetings of social, civic, and political bodies.

Sp. 251: Voice and Diction 3 s.h.

The objective of this course is to help students improve their speech by the elimination of faulty voice and articulation habits. Attention is given to such basic skills as volume, pitch, resonance, rate, phrasing, pronunciation and articulation. Tape recordings are used as a helpful device for analyzing problems and noting progress. Prerequisite: Speech 113.

Sp. 252: Introduction to Speech Correction 3 s.h.

Designed to train prospective teachers to care for defective speech in the classroom and to make educators and society cognizant of the increasing need for a definite speech education program in our public schools. A study of speech sound, speech mechanisms, symptoms causes, and treatment of minor speech, voice, and hearing disorders. Prerequisite: Speech 113.

Sp. 253: Introduction to the Theatre 3 s.h.

Survey of plays, theatre practice, and production from Aeschylus to Miller. Theory and criticism.

Sp. 254: Principles of Acting I 3 s.h.

Principles and techniques of movement, stage direction, pantomimic dramatization, characterization development and interpretation through improvisations and playing roles in scenes from contemporary dramas.

Sp. 255: Stagecraft and Lighting 3 s.h.

The study and practice in scene construction, scene painting, theatre equipment, the basic technical elements of stage electricity, and instrumentation operation and selection.

Sp. 256: Argumentation and Debate 3 s.h.

Principles of reasoned discourse and their application to controversial issues.

Sp. 257: Advanced Debate 2 s.h.

Further experience in competitive debating and in a variety of debating forms is provided. Prerequisite: Consent of instructor.

Sp. 264: Discussion 2 s.h.

Designed to develop the attitudes, skills, and knowledge of methods favorable to effective participation and leadership in discussion by conferences, committees, and other small groups.

Sp. 311: Persuasion**3 s.h.**

Study and practice in persuasive speaking. General theories of persuasion, the role of persuasion in a democratic society, and an introduction to modern experimental research in the area included.

Sp. 350: Summer Drama Workshop**6 s.h.**

The summer drama workshop combines study and practice in the dramatic arts and includes in its formal intensive study in acting, play production, direction, makeup, scene design, stage lighting, and stagecraft. In conjunction with the workshop, Clarion State College sponsors a Summer Theatre Company consisting of members of the workshop and produces three major productions.

Sp. 352: Play Directing**3 s.h.**

A study of the fundamentals and procedures of play directing and problems faced in educational theater, including analysis of the script, methods of casting, and rehearsal. Students direct one-act plays for public presentation.

Sp. 354: Oral Interpretation**3 s.h.**

The course emphasizes the understanding and appreciation of literature through developing skill in reading aloud. Help is given in selecting, adapting, and preparing literature for presentation. Special attention is given to reading materials required of the classroom teacher. Prerequisite: Speech 113.

Sp. 358: Psychology of Speech**3 s.h.**

This course aims to investigate the several theories of speech origin; study the neurological and psychological bases of speech; trace the ontogeny of speech and language; study speech as an aspect of personality structure; and investigate certain speaker-audience phenomena. The psychology of stuttering is given special consideration. Prerequisite: Sp. 252.

Sp. 359: History of the Theater**3 s.h.**

History of plays and playwrights, theater architecture, scene design, costume and methods of acting and directing from the fifth century B.S. to the present.

Sp. 361: Principles of Acting II**3 s.h.**

A study of period styles of acting, speech, and movement which includes the Classic, Shakespearean, Commedia, Restoration Romantic, and Early American periods.

Sp. 362: Principles of Stage Design**3 s.h.**

Study and practice in the aesthetics, methods, and techniques of setting and lighting design for the theater and adaptation to television. Covers both period and contemporary analysis.

Sp. 363: Theatrical Costume and Make-up**3 s.h.**

A historical survey of civil costume, techniques of costume construction, and fundamentals of stage make-up.

Sp. 365: Advanced Oral Interpretation**2 s.h.**

Inquiry into the advanced techniques of the oral interpretation of prose, poetry and drama. Emphasis on programming and direction of oral interpretative programs. Prerequisite: Speech 354.

Sp. 400: Oral Interpretation of the Bible**2 s.h.**

Oral Interpretation of the Bible in terms of literature of address, didactic literature, short story, and poetry. Special attention to unique problems of oral interpretation of this form of literature. Prerequisite: Speech 354 or consent of the instructor.

Sp. 401: Oral Interpretation of Elizabethan Literature**2 s.h.**

A study of the Oral Interpretation of the literary works of Marlowe, Dekker, Ben Jonson, Beaumont and Fletcher, Shakespeare, etc. Prerequisite: Speech 354 or consent of the instructor.

Sp. 402: Oral Interpretation of Greek and Roman Literature 2 s.h.

Oral Interpretation of problems peculiar to Greek Lyric Poetry and Drama: Homer, Aeschylus, Sophocles, Euripedes, Aristophanes, Plato's dialogues; and Roman literature: Lucretius, Vergil, Horace, Cicero, Catullus, and Ennius.

Sp. 411: Classical Rhetoric 3 s.h.

Study of the rhetorical theories of the ancient Greeks and Romans and their historical context. Includes the works of Plato, Aristotle, Cicero, Quintillian, and St. Augustine. For seniors.

Sp. 412: British Public Address 3 s.h.

Study of the rise of public speaking in Great Britain and its influence on the course of history in that democracy, both in and out of parliament. Includes the study of the speaking of Lord Chatham, Burke, Fox, Pitt, Sheridan, Gladstone, Disraeli, and Churchill. For seniors.

Sp. 451: Advanced Speech 3 s.h.

A seminar in methods of investigation and research in the field of speech. Published articles and books of a scholarly nature are analyzed and critically evaluated. Each student selects a topic for Prerequisite: Open only to juniors and seniors with approval of intensive study. The course culminates in a written research project. department chairman.

Sp. 453: Applied Phonetics 3 s.h.

An analysis of the speech sound used in English so that the student develops auditory acuity and correct reproduction of sounds; transcripts of spoken material using I.P.A. system; comparison of phonetic alphabet and diacritical marking system; study of structure and function of speech organs; voice improvement; applied phonetics for speech correction.

Sp. 454: Radio and Television 3 s.h.

Lecture and workshop in the use of radio and television as media of instruction in the classroom. Participation in the planning, writing, and producing of radio broadcasts and telecasts of an educational nature. Field work in production whenever possible. Meets 5 hours per week.

Sp. 455: Creative Dramatics 3 s.h.

A study of the techniques and theory of playmaking. Study of dramatic activities for children including story telling, story dramatization, rhythms, and pantomime. Designed for the elementary teacher.

SPEECH CORRECTION

Sp. Cor. 232: Clinical Phonetics 3 s.h.

Introduction to the science of English sounds. Consideration of phonetical applications to matters of speech correction and improvement.

Sp. Cor. 233: Anatomy of Speech and Hearing Mechanisms 3 s.h.

Study of the anatomy and physiology of the speech and hearing mechanisms.

Sp. Cor. 331: Speech and Hearing Clinic I: Practicum 3 s.h.

Supervised clinical observation and practice in case-study and conferences, diagnostic evaluations, remedial procedures, parent-conferences, and reporting. The application of theory in the development of clinical skills with individuals and small groups of children and adults, for a minimum of one hundred thirty-five (135) hours.

Sp. Cor. 332: Speech and Hearing Clinic II: Advanced Practicum 3 s.h.

Supervised clinical practice in case study and conferences, in differential diagnosis, therapy with complex speech and hearing disorders, parent-conferences, and reporting. Both individual and group techniques are emphasized with children and adults, for a minimum of one hundred thirty-five (135) hours. Prerequisite: Sp. Cor. 331.

Sp. Cor. 333: Curriculum Materials for Speech Correction 3 s.h.

Teaching techniques, source materials, visual aids, and special problems to be employed in speech practice and correction.

Sp. 334: Speech Correction for Elementary Children 3 s.h.

Designed to acquaint students with speech problems common to children on the elementary level. Emphasis is placed on the study of materials, methods and techniques used by the classroom teacher in improving the speech of all children. Prerequisite: Sp. 252.

Sp. 353: Speech Problems 3 s.h.

A study of speech sounds; speech mechanisms; and symptoms, causes and treatment of minor speech, voice, and hearing disorders designed to prepare prospective teachers to care for defective speech in the classroom and create an awareness of the necessity for a speech program. Prerequisite: Sp. 252.

Sp. 356: Speech Pathology 3 s.h.

A study of the basic organic and functional disorders of speech. This course is designed to provide more extensive background in the severe speech pathologies. Anatomy and physiology of speech structure are considered as background for the study of cleft palate, cerebral palsy, voice pathologies, and hearing problems. Prerequisite: Sp. 252.

Sp. 357: Speech and Hearing Clinic 3 s.h.

This course offers the student experience in diagnosis and treatment commensurate with his particular course background. Practice is given in the use of clinical instruments, lesson planning, case reports and histories, and treatment in both individual and group situations. Prerequisites: Sp. 353 and 356.

Sp. Cor. 421: Methods of Teaching the Speech and Hearing Handicapped 3 s.h.

A comprehensive study of specialized techniques, with emphasis upon auditory training, speech reading, and speech-retraining. This includes evaluation and utilization of special equipment and materials—visual, acoustical, and kinaesthetic. Prerequisites: Sp. 252, Sp. Cor. 232.

Sp. Cor. 422: Student Teaching with Speech and Hearing Handicapped 3 s.h.

Observation and participation in teaching and in activities related to the performance of the itinerant speech and hearing teacher's work.

Sp. Cor. 431: Hearing Problems 3 s.h.

The nature of hearing disorders and the medical, social, psychological, and educational implications are investigated, with attention focused upon the roles of parents, specialists, and educators toward the rehabilitative process. Analysis and practice in the techniques of speech and audiometric evaluation are provided. Prerequisite: Sp. 252.

Sp. Cor. 432: Audiology 3 s.h.

Continuation of Speech Correction 431.

ENROLLMENT AT CLARION STATE COLLEGE

Student enrollment has risen from 522 in September, 1954, to 2500 in September, 1964, making Clarion one of the fastest growing colleges in Pennsylvania. The present enrollment of 2500 is almost equally divided between men and women and is drawn from forty-three counties of the Commonwealth. Each year the number of students from states other than Pennsylvania increases and there is a small but encouraging representation from foreign countries.

An analysis of the enrollment in September, 1963, showed the following counties contributing substantial numbers of students to Clarion.

Allegheny	637	Forest	19
Armstrong	108	Indiana	33
Beaver	90	Jefferson	115
Blair	21	Lawrence	56
Butler	73	McKean	66
Cambria	69	Mercer	44
Cameron	14	Somerset	35
Centre	13	Venango	225
Clarion	321	Warren	41
Clearfield	75	Washington	42
Crawford	36	Westmoreland	280
Elk	40		
Erie	24		

A total of seventy-five students came from nineteen other Pennsylvania counties, from other states, and from foreign countries.



A casual, collegiate atmosphere exists at Clarion

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Clesta L. Dickson, A.B., M.S. Associate Dean of Students
Frank Lignelli, Jr., B.S., M.Ed. . . . Assistant Dean of Students
James C. King, B.A., Ph.D. . . . Director of Academic Counseling
Edward J. Keeling, M.D. College Physician
Florence B. Megahan, R.N. College Nurse
Waldo S. Tippin, B.S., M.A. Director of Athletics

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- 102 Ernest C. Aharrah, M.S., Assistant Professor, Demonstration Teacher, Sr. H. S. Science
Clarion State College, B.S.; Pennsylvania State University, M.Ed.; University of Pittsburgh, M.S.
- 101 Vaughn S. Albertson, M.A., Associate Professor, English
Rice Institute, B.A.; Columbia University, M.A.; Additional graduate work, New York University
- 104 Edgar W. Averill, Ph.D., Professor, Mathematics and Statistics
Cornell University, A.B.; Harvard University, M.B.A.; University of Michigan, Ph.D.
- Mary Kay Banner, M.Ed., Assistant Professor, Demonstration Teacher, Intermediate Grades
Seton Hill College, B.A.; Clarion State College; University of Pittsburgh, M.Ed.; Additional graduate work at University of Pittsburgh.
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University of Pittsburgh, B.S., M.S., Ph.D.
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Agnes Scott College, B.A.; Emory University, M.A.; Yale University, Ph.D.; Additional graduate study at the University of Paris (Sorbonne) and the University of Heidelberg (Germany).
- 106 Robert A. Bays, Ph.D., Professor, Head of Foreign Language Department
Emory University, B.A.; Yale University, M.A., Ph.D.; Additional study at the National University of Mexico, the University of Queensland (Australia) and the University of Heidelberg (Germany).
- 107 Mary M. Bechtold, M.S., Assistant Professor, Physical Science
Duquesne University, B.S.; Duquesne University, M.S.; Additional graduate work at Western Reserve University.
- 108 Stanley A. Belfore, M.S., Assistant Professor, Biological Science
Indiana State College, B.S. in Ed.; University of Pittsburgh, M.S.
- 109 Alpha E. Bernard, Ed.D., Professor, Education, Director of Elementary Curriculum
Graduate, Delta County Normal, Escanaba, Michigan; attended Ferris Institute and Western Michigan College of Education; Northern Michigan College of Education, B.S.; Graduate work at University of Michigan; Indiana University, M.S. in Ed., Ed.D.
- Elizabeth Pearl Bonner, B.S., Instructor, Demonstration Teacher, Third Grade Thaddeus Stevens Training School
Clarion State College, B.S. in Education; Edinboro State College, Graduate study.

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Allegheny College, B.S.; University of Pittsburgh, M.Ed.; Additional study at Union College, University of Pittsburgh, and Leybold Laboratory, Cologne, Germany.
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